

The Innovation Odyssey - Entrepreneurial Challenge

I. PROJECT OBJECTIVES

The project aims at fostering Hong Kong students' ability in innovation and creating values for the society. It emphasizes in inspiring students to develop new entrepreneurial models that provide solutions for poverty problems, bridge digital-divide, promote environmental protection, benefit the formation of new non-profit making organization, and help disadvantaged minorities in appropriate courses. Our objectives are:

1. Enhancing students' ability to connect, integrate and apply creativity, knowledge, perspectives and skills; and
2. Helping students to develop higher-order thinking skills and communication skills through investigative exploration of entrepreneurial opportunities; and
3. Introducing and reinforcing the concept of generating values for the society and social obligation; and
4. Providing sample training materials that facilitate school teachers to develop school-based Independent Enquiry Study (IES) for training students' higher-order thinking skills; and
5. Fostering an innovation and technology culture, and promote entrepreneurship.

II. NEEDS ASSESSMENT AND APPLICANT'S CAPABILITY

Students have been always taught to be responsible citizens. In schools, they have learnt about respecting others, obeying laws, participating in volunteer works, and so on. Very often, students have chances to involve different temporary charity campaigns. However, they have few or even no learning opportunity to experience what they can contribute to the society as initiators, planners, designers and major players.

During 2004-2006, we had done a successful QEF project, The Innovation Odyssey (IO). It was an original program well received and supported by many secondary and primary schools to inspire young Hong Kong students discovering creative insight and innovative talents within a fun and engaging environment. During the first IO project, schools and teachers have expressed the needs for fostering Hong Kong students' ability in innovation and creating value for the society.

With the experience gained, the new IO-EC project will emphasize on developing students to be capable to connect, integrate and apply knowledge, perspectives and skills for the benefits of our society. It aims to help teachers to instill high level thinking skills and social obligation into students, whereupon develop cross-disciplinary training to complement regular curriculums like Liberal Studies, Computer and Information Technology, Economics, General Studies, Economic and Public Affairs. The learning experience gained by participant teachers along with the provision of training material package offering at the end of the project will expedite the adoption of Independent Enquiry Study (IES) in secondary schools and will augment the varieties of cross-disciplinary general studies activities in primary schools.

Readiness of the Applicant

Our Project Team has a wide range of project experience and connections with different non-government organizations in Hong Kong. Besides developing new curriculum and teaching

materials for primary schools and secondary schools (e.g. Pilot Integrated Science Curriculum for Diocesan Girls School, 2007, IT training for La Salle Primary School 2003-2007), we are enthusiastic about providing training and community services to different sectors of the society. In 2006, we have worked with the Hong Kong Police Force Region Crime Prevention Office (Kowloon West Region) and the Kowloon West Youth Care Committee (KWYCC) to provide IT & Multimedia training workshops for youths under Police Superintendent Discretion. Additionally, we have provided various IT training for seniors (CyberSenior Network Development Association, 2007) and mentally-handicapped special-needs children (Hong Chi Children Home, 2007). Furthermore, we have also worked with the Hong Kong Federation of Youth Group on the FLL Robotics Competition in 2006 and 2007. The winning team of 2007's competition has been represented Hong Kong to participate in the international tournament held in Atlanta of United States.

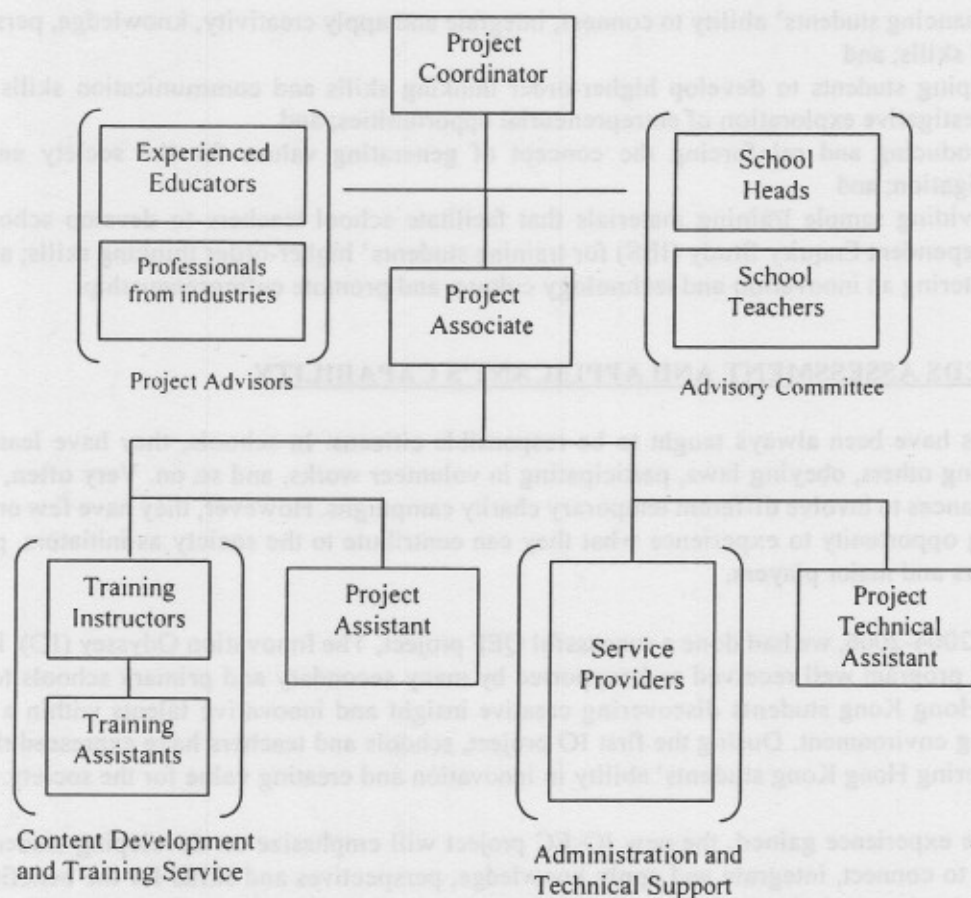


Figure 1. Project Team Organization

In the year 2004 to 2006, the Department of Computing has aligned with School of Design and Multimedia Innovation Centre to accomplish the QEF project the Innovation Odyssey (2003/0588), in which the project personnel has gained valuable experience from working closely with teachers and principals to offer training for more than 1000 participants. This experience together with the team expertise and aspirations concrete the foundation of this project. Members of the project team include:

Project Coordinator, Dr. Vincent Ng (Associate Professor, COMP) – Prior to joining the Polytechnic in 1994, Dr. Vincent Ng worked for many years in epidemiology and biometry. He has been involved in the research and development of the patient information system, cancer mapping, and many other clinical studies. Dr. Vincent Ng has been always keen in teaching, trying to explore new teaching methods and to understand needs of students. Throughout the years, he has adopted the Web-based teaching in many aspects. Currently, he is actively involved in various teaching and learning projects in different school sectors, including primary and secondary schools.

Prof. Keith Chan (Head of Department, Professor, COMP) Prof. Keith Chan has a B.Math. (Hons.) degree in Computer Science and Statistics and a M.A.Sc. and Ph.D. degree in Systems Design Engineering from the University of Waterloo, Ontario, Canada. He has a number of years of academic and industrial experience in software development and management. He is currently a Professor and the Head of the Department of Computing and is in charge of the Intelligent Home Group. Dr. Chan is also an Adjunct Professor of the Institute of Software, The Chinese Academy of Sciences, Beijing, China. Dr. Chan is active in consultancy and has served as a consultant to government agencies as well as large and small to medium enterprises in Hong Kong, China, Singapore, Malaysia and Canada. His research interests are in software engineering, data mining and computational intelligence.

Dr. Sherriff Luk (Associate Professor, Department of Management and Marketing, PolyU) – Dr Luk is the China Liaison Officer of the Department and also serves as the Director of the China MBA/EMBA Program. He has published over sixty book chapters, research-based articles in international journals, and refereed conference proceedings. Apart from his academic work, he has over extensive experience in marketing consumer goods and services in Hong Kong, China, New Zealand and Australia. Dr Luk has been a popular speaker on Services Marketing, and Marketing in China and actively consulted by both public and private organizations.

Roy Horan (Assistant Professor, Multimedia Innovation Centre, School of Design, PolyU) – Roy Horan is an international film/television/video producer, distributor, director, screenwriter and stereo surround sound post-production supervisor with 22 years experience in industry. Roy teaches media literacy, creativity, digital filmmaking, screenwriting, project management and multimedia marketing sales and distribution. He is also a martial art expert and has a strong interest in accelerated learning technique as well as the psychological affect of audio-visual stimulus on the mind's ability to learn and create.

Dr. Clifford Choy (Assistant Professor, Multimedia Innovation Centre, School of Design, PolyU) – Dr. Clifford Choy received his Ph.D. from EIE at PolyU. His research interests include embedded systems development methodology, mobile computing, artificial intelligence, digital signal processing, intelligent toys, and fast positioning techniques.

Besides the PolyU members, an Advisory Committee which forms of principals and teachers from participant schools will be established for steering the programs. Three full time project staff will be recruited for the organization and administration of the project affairs. The organization structure of the project team is outlined as shown in Figure 1 above.

III. TARGETS AND EXPECTED NUMBER OF BENEFICIARIES

The proposed project can be divided into several phases, the Training program, the Pilot Community Program and the Publicity and Dissemination. Tentatively, this program is going to serve a total of 15 secondary schools and 35 primary schools (more than 50 schools have indicated their support as listed in Appendix A. Their support letters have sent to the PolyU team and can be submitted upon request. It has not been included in the EPMS submission because of the huge file size.). Participant schools will not benefit from only having students and teachers trained in PolyU, but with the support from the University, schools and teachers would be able to establish their own school-based training activities. Thus more students can benefit eventually.

Training Program:

The beneficiaries of the Training Program will be:

- Teachers will oversee students' performance and will work closely with the Project Team to identify their school-based needs and to provide school-based learning opportunities to their students within the project scope.
 - Primary school teachers who are teaching General Studies, ICT, Visual Art or other related subject and can work with their students in the Training Program and Pilot Community Program. These two programs will normally adopt a 2:15 teacher-to-student ratio. A total of approximately 70 teachers will participate directly in the Training Program and the Pilot Community Program.
 - Secondary school teachers who are teaching Liberal Studies, CIT, Economics, Economic and Public Affairs, or other related subject and can work with their students in the Training Program and Pilot Community Program. These two programs will normally adopt a 2:20 teacher-to-student ratio. A total of approximately 30 teachers will participate directly in the Training Program and the Pilot Community Program.
- Students, who are recommended by their schools, will be able to participate in the training workshops offered in University and each workshop will have a size of about 25 to 30 students who come from up to 5 schools. Each student will normally be recommended to take two training modules out of ten. For primary school (P4-P6) students, in about two-year time, if some over-enrollment is permitted, a total of up to 525 students will participate in the Training Program. For secondary school (F1-F3) students, if some over-enrollment is permitted, a total of up to 300 students will participate in the Training Program.

Pilot Community Program:

The Training Program aims to train and prepare participants for the Pilot Community Program. Participants will design and implement their own experimental projects based on their strengths and available resource. The Program will encourage and facilitate collaboration and knowledge sharing among students by provision of suitable advisors, helpers and resource. The beneficiaries of the Pilot Community Program will be:

- Primary school (P4-P6) students who have completed necessary training in the Training Program will be guided to initiate an experimental project or research studies. Project Team will support their teachers to provide necessary guidance for their students throughout the Program period. Besides the participants of the Training Program, it is expected that about 3:1 new students will join the pilot projects or relevant learning activities in the implementation stage. The estimated number of primary students that will be involved here is about 700 (include the participants of the Training Program).

- Secondary school (F1-F3) students who have completed necessary training in the Training Program will be guided to initiate an experimental project. Project Team will support their implementation throughout the Program period. Besides the participants of the Training Program, it is expected that about 5:1 new students will join the pilot project in the implementation stage. The estimated number of secondary students that will be involved here is about 360 (include the participants of the Training Program).
- Teachers will benefit from overseeing the project development. Sharing sessions will be arranged for teachers and students to share the knowledge that have been learned in PolyU. If necessary, school-based workshops would be organized to introduce crucial skills and knowledge that have not been covered in the Training Program. About additional 5 to 10% of total number of teachers will be involved in the sharing sessions and workshops. Therefore, up to 80 and 35 primary and secondary teachers (include the participants of the Training Program) would participate, respectively.

Publicity and Dissemination:

- Parents will be invited to participate in the project exhibitions and ceremonies where they can see the intangible and tangible project achievements. Photos and video clips of each lesson will be available for parents to download from Internet after class. The project will involve approximately 450 to 540 parents.
- Teachers from participant schools who have not been involved in the Training Program will be invited to join the school-based Sharing Sessions during the Pilot Community Program. Upon finishing of the pilot program and the material consolidation, a Training Material Package booklet and DVD-ROM will be given to teachers. Introductory Sessions and Workshops will be offered for participating teachers to share their teaching and learning experience. The project will involve approximately 150 teachers.
- All students from participant schools will be invited to visit the project exhibitions. The exhibitions will promote the project objectives by demonstrating solid student project experiences. The results will inspire and encourage more students to participate similar learning activities organizing by school teachers in the future.

The total estimated number of students and teachers that could benefit directly from this project can be up to 1325.

IV. EXTENT OF TEACHERS AND PRINCIPALS' INVOLVEMENT

As the program will involve 15 secondary schools and 35 primary schools, therefore, throughout the project, the Project Team will provide written guidelines and regulations for both teachers and students prior to any teaching or learning activity. Regular meetings with principals/school representatives will be hosted at PolyU for evaluating teachers' workloads and involvements.

1. Content and Training Material Development

Teachers and principals from participant schools will be invited to join the Advisory Committee to share their experience and advices on material development for the Training Program. They will be provided opportunities to express their specific needs and issues.

2. Training Program

Teachers will review the objectives of the available training modules and recommend to eligible students accordingly. Teachers will recruit a team of students to learn and participate in both the Training Program and the Pilot Community Program. They will be encouraged to join university workshops together with their students. In addition, they will be invited to provide comments and suggestions on individual training modules.

3. Pilot Community Program

Teachers will work closely with University staff, teachers and principals from other participant schools, educators and professional experts to form a cohesive team to steer the student project developments.

This practical experiment opportunity aims to encourage students to create values for others out of the available resource. Therefore, during the project planning and development stages, teachers are asked to remind students to emphasize on creating values, team working, practicing problem-solving procedures, applying various thinking skills, and investigating practicability of using technology and available resource.

To encourage participant students to share the experience with more students in school, the Project Team will assist teachers to host in-school sharing sessions or exhibitions at the later stage of the Program. Teachers may decide appropriate topics for sharing sessions in order to fit in with their teaching of regular curriculums.

V. IMPLEMENTATION PLAN AND TIMELINE

The proposed project has four phases starting from Jan 2008 till Aug 2010.

1. Liaison and Material Development

- **Formation of Advisory Committee (Jan 2008 to Feb 2008)** - the project will start by forming an Advisory Committee of university staff, school principals, teachers and educators. The Advisory Committee will be responsible for steering the project development, advising on project execution, and provide inputs for inter-project review and evaluation.
- **Content and Training Material Development (Feb 2008 to Jun 2008)** - Instructors will initiate the development of necessary training material based on the training program's objectives and the advices from the Advisory Committee. They will be responsible for developing the materials to be used in the training program as well as for later adoption in the training material package.

There are a total of 8 electives Modules (15 hours each) and 2 compulsory Modules which will be provided at different phases. (Detail outlines of the modules are in Appendix C.)

- Introduction (Compulsory)
 - Module 1: "What to do with what you have?" - Introduction to Entrepreneurship

- Insight and Discovery (Electives)
 - Module 2: "Where is the best option?" - Critical Thinking Skill for Making Better Decision
 - Module 3: "Innovations for a better life" - Creative Thinking Skill for Making Your Life Easier
 - Module 4: "Learning from experience" - A Reverse Engineering Approach for Generating New Ideas
- Opportunity Refinement (Electives)
 - Module 5: "Trend and timing" - Entrepreneurial Opportunity Refinement Part 1
 - Module 6: "Seeking alternatives" - Entrepreneurial Opportunity Refinement Part 2
 - Module 7: "The world of numbers" - Determining Mathematical Feasibility
- Incubation (Electives)
 - Module 8: "Packaging your ideas" - Developing a Convincing Package
 - Module 9: "Technopolis" - Adapting to Different Technologies
- Evaluation (Compulsory)
 - Module 10: "Can It Be Better" - Evaluation of Entrepreneurial Projects

2. Training Program (Jul 2008 to Aug 2009)

Training program will be offered to student participants as the requirement for proceeding to the next phase. Each training program will provide seats for 30 participants of similar backgrounds or academic levels. (A tentative schedule is shown in Appendix B.)

3. Pilot Community Program (Jan 2009 to Jan 2010)

The Pilot Community Program is a project-based learning program which emphasizes on continuous discussion and evaluation. A web platform will be developed and maintained in PolyU for participants to share their experience.

- **Stage 1 - Insight and Discovery (1 month)** This initiative stage requires participants from the same school to form an entrepreneur team which will be overseen by at least one school teacher. Each entrepreneur team will then select their desired topic based on their team experience and preference. PolyU will match and ally relevant expert or advisor from industries for each entrepreneur team. Meetings and visits will be arranged for entrepreneur teams to understand the actual operations and issues in the relevant businesses. After completion of meetings and visits, instructor will guide participants to discover underneath business opportunities.
- **Stage 2 - Opportunity Refinement (1 month)** The participant teams will be instructed to plan and prepare necessary resource for their entrepreneurial projects. They will be required to submit formal proposals to advisors prior to project implementation. Advisors will comment on its feasibility and potential issues. PolyU will monitor each team's working progress and may ally additional advisors upon necessary.
- **Stage 3 - Incubation (6 to 9 month)** Once business plan has been confirmed, participant team will begin the implementation as planned. As the same time, they will initiate the feasibility study of the project. Their implementation will be supervised and mentored by both school teachers and PolyU. PolyU will keep track of project progress and provide necessary helps and suggestions to each team. The scopes of the participants' plans will be refined so that their Pilot Community can be completed within the given timeframe. Furthermore, participants are required to revise and consolidate their business models for better sustainability throughout the Incubation period.

- **Stage 4 – Evaluation (1 month)** Participants will be required to self-evaluate their projects scientifically based on different aspects. Each participant will be required to present their project in a showcase exhibition. Their incubation results will be reviewed and commented individually by project advisors, market professionals and academic experts.

4. Publicity And Dissemination (Aug 2009 to Aug 2010)

- **Public Exhibitions and Awarding Ceremony**
 - **Project Exhibition at PolyU (Aug 2009)** - To consolidate results of the Pilot Community Program, a project exhibition will be held at PolyU to showcase participants' effort. This joint-school event will serve to provide sharing and learning opportunities for participants and their schoolmates.
 - **School-based Sharing / Exhibitions at Participant Schools (Feb 2010 to May 2010)** - Participants will display their works in forms of exhibitions, sharing sessions, or websites at their own schools. During these inter-school publicity events, teachers may recruit new team members to recur the project cycle.
 - **Project Exhibition for Public (Feb 2010)** - Training Program and Pilot Community Program results will be gathered and exhibited in public. The exhibition will be hosted in an appropriate public venue during weekend of school holiday. Invitations will be sent to primary schools and secondary schools in Hong Kong. Also, renowned professionals will be invited to launch the exhibition.
 - **Awarding Ceremony (Feb 2010)** - An awarding ceremony will be hosted at the end of the public exhibition to acknowledge participant students and teachers. Teams with outstanding results will be recognized, and all participants will be given certificates in recognition of their praiseworthy efforts.
- **Publishing of Project Showcase and Training Material Package (booklet and DVD) (Sept 2009 to Mar 2010)** Materials used in the Training Program along with the case descriptions of the Pilot Community Program will be modified and packed into DVD for both participant teachers and non-participant teachers. The package will serve as reference-materials for subjects like Liberal Studies, CIT, Economics, General Studies, and, Economic and Public Affairs. Besides, a website containing the training package will be established for teachers to download.
- **Introductory Sessions and Workshops (Feb 2010 to Aug 2010)** After finishing the DVD package, introductory sessions and workshops will be hosted at participant schools and PolyU for teachers and students. These sessions and workshops will aim at elaborating on applicable training activities that can be integrated to school subjects like Liberal Studies, CIT, Economics, and Economic and Public Affairs. By joining the workshops with students, teachers can experience students' learning process and difficulties.

VI. EXPECTED OUTCOME AND DELIVERABLES

The project will have both tangible and intangible outcomes as follow.

Overall

- Students will be offered opportunities to learn innovation process and generating values out of available resource; and
- Teachers will have a set of reference materials for teaching Liberal Studies, General Studies, CIT, Economics, and, Economic and Public Affairs; and
- Teachers will have sample project reference for designing project-based extra-curricula activities; and
- Students will be offered training for enhancing critical thinking skills, creative thinking skills, and problem solving skills; and
- Participants will be offered learning opportunities to practice efficient team working and communication skills; and
- Participants will be offered training for learning adapting to new technologies efficiently.

Training Program

- An innovation and entrepreneurial curriculum with ten training modules in total 150 hours will be developed; and
- University training workshops that are of total 300 lessons / 900 hours will be offered to Primary and Secondary teachers and students; and
- Showcase exhibitions will be hosted as annual summer events to demonstrate student project results; and
- Joint-schools learning and sharing opportunities will be provided; and
- Cross-disciplinary training contents and activities will inspire teachers of traditional subjects;
- Pamphlets describing the Training Program and its content will be distributed to schools and teachers; and
- Training workshops that comprise integral entrepreneurial innovation elements such as high level thinking skills, technical knowledge and practices; and
- Participants will be provided showcase and exhibition opportunities in PolyU or other public venues.

Pilot Community Program

- Pilot entrepreneurial teamwork projects will be accomplished by participant students; and
- Students will be given opportunities to discuss their projects with subject experts; and
- Students will be guided to keep track of the project process and results in presentable formats; and
- Reports of pilot projects will be assembled by the Project Team; and
- Pamphlets describing the Pilot Community Program and its results will be distributed to schools and teachers; and
- Sharing sessions will be hosted at PolyU for participants from different schools; and
- The Project Team will assist teachers to host sharing sessions for other students at their schools upon completion of the pilot project; and
- Teachers may integrate the pilot projects into the regular curriculum according to the project natures.

Entrepreneurial Challenge 2007

Department of Computing, HK PolyU

VII. BUDGET

The Hong Kong Polytechnic University has been continually promoting applied researches and applications for the benefits of mankind. Along this vision, the Department of Computing has contributed academic staff support, computing facilities, venues for training, and administrative support for projects that would generating new learning opportunities for students. The budget below lists out the imperatives that the applicant wishes to seek for support from QEF.

Participants are expected to share at least 50% costs of the workshop instructors, tutors and consumable materials. Each participant student will hence be required to pay a tuition fee of about \$450 for joining two modules in the Training Program and the Pilot Community Program. As there are total 15 secondary schools and 35 primary schools will be benefited from the project, the QEF cost for each participant school is about just \$48,250.

The overall QEF budget for the project is HK\$ 2,412,600.

Period: 2 years and 8 months

Course = 2 modules / 10 workshops / 30 contact hours

No. of School: 50 participants

Capacity of workshop = 5 teams

No. of Students (Training Program): 900

Team formation = 5 students + 1 teacher

Currency: Hong Kong Dollars (HK\$)

	Item to be Financed	Amount	Units	X	Rate	Subtotal
A	Staff Cost				(Included MPF)	
	Content and Training Kit Development					
	Project Associate (Post A)	9	Months		23,000.0	207,000.0
	Project Assistant (Post A)	9	Months		13,650.0	122,850.0
	Project Technical Assistant	3	Months		8,400.0	25,200.0
	Training Program					
	Project Associate (Post A)	15	Months		23,000.0	345,000.0
	Project Assistant (Post A)	15	Months		13,650.0	204,750.0
	Project Technical Assistant	15	Months		8,400.0	126,000.0
	Pilot Community Program					
	Project Associate (Post A / PCP)	8	Months		25,000.0	200,000.0
	Project Assistant (Post A)	8	Months		13,650.0	109,200.0
	Project Technical Assistant	8	Months		8,400.0	67,200.0
	Publicity and Dissemination					
	Project Associate (Post B)	4	Months		25,000.0	100,000.0
	Project Assistant (Post B)	4	Months		13,650.0	54,600.0
	Project Technical Assistant	4	Months		8,400.0	33,600.0
					Subtotal	1,595,400.0
E	Equipment					
	Digital Camera and Video Shooting	1			7,300.0	7,300.0

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Department of Computing, HK PolyU

	Equipments				
	e-toy and Game Learning Materials	1		20,000.0	20,000.0
	Electronic Components and Learning Devices	1		20,000.0	20,000.0
	Reusable Materials for Training Program	1		20,000.0	20,000.0
	Consumable Materials for Training Program	1		20,000.0	20,000.0
	Consumable Materials for Pilot Community Program	1		40,000.0	40,000.0
	Tools and Stationery	1		10,000.0	10,000.0
				Subtotal	137,300.0
L	Services				
	Training Content and Material Development	400	Hours	250.0	100,000.0
	Teaching Service for Workshops and Pilot Community Program*	1050	Hours	250.0	262,500.0
	Preparation and Tutoring Service for Workshops	4050	Hours	40.0	162,000.0
	Graphic Design (e.g. poster, pamphlet, leaflet, booklet)	1		30,000.0	30,000.0
	Printing and Publishing	1		30,000.0	30,000.0
	Web site Design and Development	1		20,000.0	20,000.0
	DVD-ROM Design, Development and Duplication	1		30,000.0	30,000.0
	Editorial Service	1		16,700.0	16,700.0
				Subtotal	651,200.0
B	General Expenses				
	Postage	1		10,000.0	10,000.0
	Traveling Cost	450	round trips	20.0	9,000.0
	Photocopying	90000	copies	0.1	4,500.0
				Subtotal	23,500.0
K	Others				
	Project Exhibitions and Ceremony				
	Production Work, Venue, Promotion, Equipment Rentals, Production Crew, Moving Services, etc.	3	exhibitions	40,000.0	120,000.0
	Sharing Sessions				
	Production Work, Venue, Promotion, Moving Services, etc.	50	sessions	500.0	25,000.0
				Subtotal	145,000.0
C	Contingency expenses				
	Non staff cost contingency expenses	1		28,700.0	28,700.0
				Subtotal	28,700.0
O	Overhead Charge				
	Subsidy of overhead charged by PolyU	1		206,500.0	206,500.0
				Subtotal	206,500.0

Entrepreneurial Challenge 2007

Department of Computing, HK PolyU

	TOTAL COSTS				2,787,600.0
P	Project Income				
	Student Fees for one Course (for covering at least 50% of L2,L3 & consumable materials)	150	teams of 5 students and 1 teacher	2,500.00	375,000.0
	TOTAL QEF BUDGET (Total Costs - Project Income)				2,412,600.0
	Cost per participant school				48,252.0

* 900 hours for the Training Program and 150 hours for the Pilot Community Program

Note: Out of the HK\$651,200 services budget, HK\$375,000 is to be financed by the project income.

Full-time staff for the project:

- **Project Associate:** should possess MSc degree or equivalent; with 4 or more years in teaching and learning related work. Duties include the coordination and supervision of project staffs, design and planning of the training materials, supervision of the community service projects and publicity/promotion arrangement.
- **Project Assistant:** should possess an undergraduate degree or equivalent, with 1 or more year in education or community service related work. Duties include liaisons with schools, assisting the development of the training materials, execution of the community services (2 assistants are needed in the Pilot Community Program) and helping the publicity/promotion.

VIII. EVALUATION AND COMMUNICATION

To measure the effectiveness of the proposed project, there are three main evaluation criteria. They are the total number of beneficiaries, the beneficiaries' acquirements and achievements, and the publicity of the project. The table below lays out the indicators and the corresponding evaluation methods.

<u>Evaluation Criteria</u>	<u>Quantifiable indicators or outcome-based indicators</u>	<u>Evaluation Method</u>
Total number of beneficiaries	1. Number of schools	The number of schools participated will be recorded
	2. Number of teacher participants	The number of teachers participated will be recorded
	3. Number of student participants	The number of eligible students will be recorded
	4. Number of visitors in exhibitions and ceremonies	The number of visitors in each exhibitions and ceremonies will be counted
Beneficiaries' acquirements and achievements	5. Workshop attendance	Attendance will be recorded
	6. Number of pilot projects	The number of pilot projects will be recorded
	7. Number of sharing sessions for participants	The number of sharing sessions holding at schools or PolyU for participants

	8. Participants' feedback	Questionnaires will be given to all participants after each training module.
	9. Number of students eligible to receive Certificates of Participation	Certificates will be issued based on the criteria which be discussed in Advisory Committee meeting.
	10. In-class awards	Instructors will evaluate students' performance based on pre-defined criteria for each module.
	11. Inter-class awards	Students' projects will be evaluated by judge panel formed by instructors.
	12. Pilot project awards	A judge panel formed by university staff, teachers, principals and professionals will evaluated all pilot projects based on the agreed criteria.
	13. Teacher comments on participants	Teachers will oversee and evaluate each participant from the joining of Training Program until the completion of pilot projects. Performance record for students will be archived.
Publicity of the project	14. Number of visitors in exhibitions and ceremonies	The number of visitors in each exhibitions and ceremonies will be counted
	15. Number of Training Material Package has been distributed to teachers	A distribution list will be built.
	16. Number of participants in the Training Package Introductory Sessions and Workshops	The number of participants will be counted.
	17. Number of press articles regarding the project	Press articles will be counted and archived.

