

**TOPIC 64 National-scale E-learning  
Network: Achieving International  
Recognition with Innovative Use of  
ICT, Focus on User Needs, Business  
Incubation and Public-Private  
Partnerships**

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**Abstract**

*TOPIC64 is a project to develop a national system of sustainable and locally adaptable e-learning centers that targets hundreds of thousands of trainees in the next 5 years. During 2006-2007 to date, the project has trained 10,446 students in its 64 member centers, 40% of whom free of charge, 474 teachers, benefited 70,692 other students in 426 affiliate centers, and helped 15 out of 64 member centers reach economic sustainability. The project involves a 7-party public-private-partnership including Microsoft, USAID, Qualcomm, EVN Telecom, Hewlett-Packard, Vietnam government agencies, and is run by CRC-TOPIC Business Incubator of Hanoi University of Technology in cooperation with Hanoi Open University. In 2006, the projects was selected*

*by Development Gateway Award into the 7 finalists from 160 ICT project worldwide, and the organization recognized by the World Bank InfoDev program among the 4 global best practices from 62 incubators worldwide.*

*This article summarizes the project's objectives and activities, and analyzes its key success factors: innovative and efficient use of ICT, especially e-learning technologies and methodologies; serving diverse user needs and providing equal opportunities; facilitation and monitoring of sustainability through world-class business incubation concepts; and leveraging multi-stakeholder public-private partnerships. It also demonstrates how the scalable management techniques applied in this project could be transferred and replicated to other ICT for Development initiatives.*

## **Project Objectives and Activities**

The project's long-term vision is to develop a national system of sustainable and locally adaptable e-learning and services centers. In the next 5 years, this means targeting hundreds of thousands of trainees. During 2006-2007 to date, the project has exceeded initial expectations by having trained 10,446 students in its 64 member centers, 40% of whom are free of charge. In addition, 474 teachers have been trained and 70,692 other students benefited from the new curriculum and teaching methodology in 426 affiliate centers. 15 out of 64 member centers so far have achieved cash-flow break-even, an indicator of economic sustainability.

The e-learning initiative helps bridge the gaps between supply and demand of skilled workers in an economy that grows 8% annually but still has over 40% of population working in agricultural sector.

Each year, 1 million applicants apply for 200,000 college seats, a 20% chance for college-age students to attend degree education, compared to well over 50% in developed western economies or 30-40% in neighboring ASEAN countries. Even for vocational training schools, only 30% of the annual demand is met and training quality is low, resulting in 15% unemployment rate among the 20-25 year group. For the whole education system in general, there is a huge shortage of teachers, infrastructure and updated relevant content. All these issues can only be addressed efficiently with innovative and suitable application of e-learning technologies and methodologies, in an economically sustainable and locally adaptable context.

From 2006 to 2007, the project has exceeded its short-term goal of “developing sustainable community ICT training centers in 64 provinces of Vietnam”. In order to deliver Basic IT training to communities, it granted hardware, software and capacity building services to 64 centers in 64 provinces (TOPIC64 centers), and also provided curriculum and coaching to 426 affiliate centers. Besides setting free-training quotas to meet social objectives, the project encourages the centers to design and provide market-relevant courses for fees. In order to achieve this, teachers are trained on the new curriculum and teaching pedagogies, and center managers are coached to be able to operate with economic sustainability.

The project's major milestones include:

- Jan 2006: CRC-TOPIC signed grant agreement with Microsoft, did project planning and taking over 4 centers previously set up by Microsoft
- Feb-Mar 2006: USAID, Qualcomm, EVN Telecom joined
- Apr 2006: Launch ceremony attended by Bill Gates and the Deputy Prime Minister, the process started with selecting the first 15 out of 500 centers; online and phone surveys, field visits
- Aug 2006: First 15 centers up and running, Hewlett-Packard joined, website and online forum launched for experience sharing, customized Moodle-based e-learning system launched with courses for teachers and center managers
- Nov 2006: 2,660 students trained in 15 centers, 120 teachers trained via e-learning, 11,000 students indirectly benefited from the new curriculum and teaching methodology in 200 affiliate centers. Project showcased at APEC Summit conference "Strategies for Workforce development". Received visit from US Trade Representative Susan Schwab
- Dec 2006: Selection process continued to choose the remaining 45 centers
- Jan-Feb 2007: Received visits from senior executives of Microsoft, Qualcomm, government agencies etc.
- Mar-Apr 2007: Face-to-face workshops with 22+23 centers
- Apr 2007: Start implementation of hardware, software, connectivity, capacity building activities. Center managers and teachers engage in e-learning courses and online experience sharing
- Jul 2007: All 45 new centers up and running
- Sep 2007: 10,446 trained with basic IT curriculum, 474 teachers trained via e-learning, 70,692 students benefited

from new curriculum and teaching methodology in 426 affiliate centers, 15 out of 64 centers reached economic sustainability

Main ongoing activities include:

- Training and coaching of teachers and center managers, through a combination of momentum-building face-to-face seminars, VCDs, guidebooks, e-learning courses, quizzes, exams in Moodle-based system, and experience sharing in online forums
- Gathering information from public surveys and center managers, teachers to study user needs in different communities, target groups
- Customization and distribution of Microsoft UP basic IT curriculum to member and affiliate centers: book and CD-text format for 100% face-to-face delivery, multimedia self-learning format via CD or online for 30-50% face-to-face delivery.
- Monitoring and facilitation of training and sustainability targets for 64 member and 426 affiliate centers
- Advocacy of the project and TOPIC64 brand, via press releases, publicity events, high profile visits, contests, project website etc.
- Development of new training content – courses and programs in ICT, business, finance etc. with various partners such as Microsoft, HP's ICT for SME program, Small Business School on the PBS channel in the US, the Global Trade and Investment Management Network, the Open University of UK, Assumption University of Thailand, Hanoi Open University, MIT Open Courseware Initiative, Vietnam Education Foundation, IFC's Business-Edge program, etc.

## Innovative and Efficient Use of ICT

The project leverages contribution of ICT through the advantages of e-learning: reduce the need for costly brick-and-mortar school infrastructure and traveling, reduce the need for personal delivery of repetitive lectures so teachers can be freed up to engage in more interaction with students, allow more timely and efficient updates of training content that are frequently needed in a fast-paced economy, address the needs of diverse student base by allowing flexible learning “anytime, anywhere”.

The project leverages ICT pragmatically and efficiently considering the country’s overall level of technology infrastructure development. In the first period of 2006-2007, we focused on building access infrastructure in 64 provincial centers (10-20 PCs each, network equipment, office software), and e-learning and e-coaching was applied only for teachers and center managers (through a custom-developed support website), while students so far attended only face-to-face classes that aim to develop their basic IT skills. In the next 5 years, we will adopt suitable delivery and teaching models for different student groups with particular skills and infrastructure available. For example, the same learning content can be delivered through TV broadcast, VCDs and dial-up lines to remote-area students, as well as through online videos, multimedia downloads and ADSL connections to better-equipped students.

The project uses existing technologies innovatively to address particular needs of beneficiary groups:

- *E-learning and e-coaching for teachers and center managers:* We found that in similar national-scale project, money and time had been wasted on holding lengthy face-to-face trainings and seminar, where participants had to travel

and spend inefficient time together. In our case, we invited participant only to one initial face-to-face seminar, where they build team spirit and momentum. Then further training and coaching is conducted via a combination of VCDs, guidebooks, online text and multimedia course content, online quizzes and exams, online forum etc. We have developed a Moodle-based custom e-learning system, and authored lecture videos, multimedia content to this end.

- **Developing self-learning curriculum:** In the initial pilot period of basic IT training courses, we found that a main bottleneck in the centers' training capacity is the shortage of teachers. It is inefficient for teachers having to spend 100% time face-to-face with students, often delivering repetitive lectures. We therefore developed a self-study courseware, with which students can watch multimedia animations on how to handle functions of Word, Excel, Powerpoint etc. Then they only have to spend 30-50% of the time in face-to-face sessions with teachers to receive interactive guidance. This concept will be further applied in the development of better training content for short courses and degree programs in IT, business, finance etc.
- **Pragmatic and efficient use of ICT, considering the existing technology infrastructures:** In more developed environments, e-learning is often meant as full online delivery of rich multimedia content to students accessing from home or work. In our case, limited bandwidth and access equipment urged us to find other suitable delivery methods. For example, during a pilot course, students self-studied from books, and then gathered for recitations and Q&A with the teacher. 50 students sat in a remote classroom, with one PC, webcam, projector and ADSL connection. The teacher sat in Hanoi with a connected PC and webcam. Students saw the teacher live on the projected screen, and

the teacher also saw the class. This allowed a reasonably good simulation of face-to-face settings with very limited bandwidth: voices were transmitted with very good quality, video quality was not very good but sufficient to convey teacher's emotions, and help maintain class discipline by suggesting the teacher was there virtually.

## **Serving Diverse User Needs and Providing Equal Opportunities**

Among the 64 TOPIC64 centers, 33% are vocational schools, 28% lifelong training centers, and 39% others are not-for-profit centers. They are serving diverse target groups: high school students, high school drop-outs, adult blue collar workers, distance learning college students, farmers, minorities, women's associations etc. In addition to providing courses to the community for fees, each center receives quota of 20 free trainings a month. During the competitive selection of the centers to become TOPIC64 members, we considered their relationships with local NGOs, disability groups, etc. ensuring that these free training will go to a diverse group of needy people such as children of war invalids, farmers who lost their land, people with income below poverty line, trafficked women etc.

We have collected hundreds of self-written case stories from students about how the project and training courses changed their lives. Several of these stories have been published in local and international press, especially in cases of disadvantaged people being able to find jobs, enroll in further studies, run their small businesses etc.

The project has invested great funds and efforts into customizing curricula and designing different courses that meet student demands (e.g. courses on advanced office application, IT for SMEs,



SME management, online tutoring for university entrance exams etc...). The development and customization are based on public surveys in the communities, and on local market intelligence – managers and teachers of provincial vocational schools, continuing education centers, etc. are veterans in the education industry who are in the best position to know their local markets.

Mr. Akhtar Badshah, Microsoft senior director of global community affairs, in his visit to TOPIC64 on February 12-14, 2007 acknowledged that this project is one of those who have done most in customizing curriculum to different target groups, among over 100 projects in the MS Unlimited Potential program worldwide.

Perhaps the strongest evidence is that 60% of our 10,446 students trained until September 2007 are paying customers.

## **Facilitate and Monitor Sustainability**

For each of the 64 local centers, we measure three degrees of sustainability

- Short-term: cover out-of-pocket expenses only
- Medium-term: fully cover all ongoing expenses
- Long term: cover expenses and depreciation, amortization

Measurements are performed by the project's central support team, surveying the centers monthly to get detailed data such as tuition and fees collected, salaries paid, utility bill expenses, maintenance costs etc.

To date among the first batch 15 centers 100% have achieved short-term, 87% (13/15) medium-term, and 53% (8/15) long-term sustainability.

For future prospects, the project is receiving great support from all stakeholder groups, because it has so far demonstrated its effectiveness. Trainees find the courses useful and practical, local centers are proud of being associated with the TOPIC64 brand and see the project as a great revenue source, central government entities appreciate the relevancy of training content and are directing public training funds to the local centers, businesses value the standardized basic IT skills TOPIC64 students possess as opposed to the old state certificates most other training centers offer, corporate sponsors (especially MS and HP) are encouraged by early successes and eager to invest more next year into expanding the program.

We facilitate the centers' sustainability through 3 means:

- Encourage and pressurize leaderships of local mother organizations (vocational schools, continuing education centers) to provide autonomy and proper incentives to the managers directly in charge of the TOPIC64 location. In effect, this turns the salaried teachers into independent entrepreneurs who will have all the motivations to maintain and grow their centers.
- Build management capacities: we train and coach the managers and the teachers on management, marketing, operations, teaching skills etc. This is performed via a number of tools: guidebooks, training VCDs, face-to-face seminars, e-learning lessons and exams, on-site consulting, online forum and hotline telephone support etc.
- Offer a diverse course selection: based on public surveys and market intelligence collected from the local centers, we centrally develop different courses that will meet paying demand (advanced office apps, IT for SMEs, SME management, online tutoring for university entrance exams etc...)

In accordance with the project's shift from infrastructure development to content development, income sources will also shift from grants to training fees. In order to facilitate this shift, substantial efforts have been put into promoting entrepreneurial spirit in the project.

Various local initiatives have demonstrated the entrepreneurship sentiment that the project helped build:

- Center managers regularly customize training courses and other services innovatively in order to meet local clients' needs: basic IT courses for small and medium enterprises, for industry park blue-collar workers, ICT applications in businesses, public internet access service, etc.
- All provincial TOPIC64 centers proactively engaged their colleagues from other centers in counties and localities not associated with TOPIC64, sometimes tens of kilometers away, to participate in the train-the-trainer courses and online exams. Particularly these centers have enrolled the most teachers to date: TOPIC64 Dong Nai (36 teachers), TOPIC64 Hung Yen (26 teachers), TOPIC64 Kon Tum (22 teachers).
- Revenues from these courses are channeled back into enhancing local marketing activities and designing new courses, purchasing additional equipment, in contrast to the centers waiting for public funds like before. On average each center generates 70-80% of its revenue from paid training and services.
- Through the award-winning business incubator in Hanoi, CRC-TOPIC nurtures online service start-ups that can make use of national distribution networks (such as 911 PC repair hotline service, export-import advisory, e-learning short-courses, online tutoring for university admission exams). The local TOPIC64 centers are then encouraged to incubate "local distributors" for those companies.

## **Leveraging Extensive Public-Private-Partnerships**

The project's original goal was to develop sustainable community ICT training centers in 64 provinces of Vietnam. This is an unprecedented large scale effort, which requires substantial resources and know-how to implement. In addition, education is still heavily regulated in this country. Therefore a multistakeholder partnership was necessary, involving private, public sectors, academia and civic groups, in order to ensure that resources and know-how are pooled, green lights are on for regulated issues, and the right target groups are reached.

The project successfully developed a public-private-partnership model involving many stakeholders: multinational sponsors (Microsoft, QUALCOMM, HP, USAID), local businesses (EVN telecom), local government entities (Ministry of Science and Technology, Ministry of Education and Training, Ministry of Post and Telecommunication, Vocational training agency), academia (CRC-TOPIC and Hanoi University of Technology). This cooperation is often cited as a showcase and dubbed "7P" in conferences and seminars such as the APEC Conference "Strategies for workforce development" on September 18-20, 2006.

A Steering Committee was set up consisting of 4 Vice Ministers of Education and Training, Science and Technology, Post and Telecommunications, and Vocational Training Agency. The Steering Committee meet with sponsors and the implementation team semi-annually, and receive regular reports in order to monitor the project's achieved targets and progress, and set directions.

*The advisory board that provides ongoing guidance to the project management unit consists of 15 representatives of main stakeholders,*

and has successfully developed a governance framework that balances consensus and avoids micromanagement.

An Advisory Board was set up consisting of representatives of sponsors Microsoft, USAID, Qualcomm, Hewlett-Packard (private corporations), and EVN Telecom (a public-owned corporation representing the government). This Board meets and receives reports quarterly, and monitors the projects milestones, targets, and makes major decisions. Board members also stay in regular email contact, and provide hands-on support for emerging issues such as publicity, events, temporary cash-flow problems, curriculum development etc.

The implementation team (CRC-TOPIC) reports to the Advisory Board quarterly along a set of quantitative targets, a financial budget, schedule milestones and qualitative discussions. The implementation team also reverts immediately to the Board for critical issues such as publicity events, major budget changes, schedule changes etc.

Advisory Board members often consult and brainstorm with each others on events, new curricula, additional equipment and funding sources. As results of this, the MSP was formed in the first place, additional PCs and printers were granted, and high profile officials and executives such as Bill Gates and US Trade Representative Susan Schwab were brought to site visits.

Member provincial centers, although they are beneficiaries, were also deeply involved in shaping the project's implementation. At the beginning, a workshop was held with 7 centers in Hanoi area prior to selection of the Hanoi beneficiary, in order to solicit their inputs into structuring of material grants and capacity building support. When each of the batches were selected

(15+22+23 centers), they were invited to face-to-face workshops and small-group discussion, in order to exchange accumulated experiences and provide further inputs to the implementation process. Building on the momentum of these workshops, the centers engage in on-going online discussions during the process. The centers were also requested to demonstrate successful cooperation with local NGOs, regulators, and other organizations during the selection process (on average 2-3 partners/center). These connections are then successfully leveraged to ensure that the free training reach the needy target groups, to help securing jobs for trainees, to find additional grant sources, and to advocate the program.

The extensive 7-party public-private partnership has brought great benefits to the project:

- The partnership helped mobilize resources: cash, equipment, software, in-kind support, know-how etc.
- It allows the project to reach a scale unprecedented in the country and perhaps in the South-East Asia region: 64 provincial centers, 426 affiliate centers, over 10,000 students directly trained and over 71,000 students indirectly benefited.
- The many partners help the project to reach critical mass, therefore drawing attention and interest to take advantage of many high-profile publicity activities: visits of senior officials and executives such as Bill Gates and US Trade Representative Susan Schwab, showcase presentations at international conferences such as APEC Strategies for Workforce Development 2006, InfoDev Global Forum on Business Incubation 2006, InfoDev Asia and the Pacific Incubator Conference 2007 etc.
- Involvement of 4 vice-minister level officials helped turn on green lights everywhere, especially at provincial and local governments. This is a critical issue as education is heavily regulated in Vietnam.

- The accumulated know-how and on-going inputs from all parties allowed quality implementation of the project, ensuring that diverse needs of different communities are met, latest technologies are used efficiently, and best compromises are reached among different agendas.

Beside the great benefits, the partnership also presented substantial challenges:

- **Balancing agendas:** The partners represent different organizational agendas, and the representatives represent even more personal views. It was very difficult to understand, balance and accommodate over 15 people's different views.
- **Frequent changes and complex administration:** The partnership was not formed before the project, but evolved along with the project. Microsoft invited USAID, who then brought Qualcomm and EVN Telecom, then HP joined months later. Each partner has its own reporting and administrative procedures. This meant that project proposals had to be submitted in 20+ versions, detailed budgets have to be maintained in four dimensions, and reports have to be submitted in multiple formats. All these were under constant pressure due to the high profile publicity events.
- **Multiple suppliers:** the scale and complexity of the implementation meant that over 25 suppliers had to be managed. Different vendors were contracted for PC supply, for network integration, stationary, local ISP etc. Some of them, such as the local ISPs, could not be competitively selected but appointed by a sponsor. Therefore it was very difficult to manage all these vendors while meeting project deadlines.

## Conclusion

The TOPIC64 project has successfully applied the following key factors to achieve its results:

Innovative and efficient use of ICT, especially e-learning technologies and methodologies; serving diverse user needs and providing equal opportunities; facilitation and monitoring of sustainability through world-class business incubation concepts; and leveraging multi-stakeholder public-private partnerships. It has also demonstrated how the scalable management techniques applied in this project could be transferred and replicated to other ICT for Development initiatives. Consequently, the project was selected by the Development Gateway Award 2006 into the 7 finalists from 160 ICT project worldwide, and the organization was recognized by the World Bank InfoDev program among the 4 global best practices from 62 incubators worldwide.

Building on the momentum of early successes, the TOPIC64 project is expanding in depth and reach, and is also sharing its experience with many other partner organizations.

The Ministry of Science and Technology has requested CRC-TOPIC to provide training and consulting to technology business incubators in different provinces. CRC-TOPIC has completed projects for 6 provinces to date. Besides advising them on business incubation issues, this involves helping them set up effective public-private-partnerships: i.e. mobilizing support from both government agencies and private companies in their area.

*Microsoft Corporation* has made requests to TOPIC64 to develop a plan to provide e-training and coaching on sustainability to about 200 centers in 16 Asian countries. The proposals are being developed



and reviewed.

The World Bank's InfoDev program has made requests to CRC-TOPIC Incubator to develop a plan to provide e-training to managers of 500 incubators in the Asian Association of Business Incubators. The proposals are being developed and reviewed.

We are also advising the Gates Foundation in their early studies of the Vietnamese situation to implement a Libraries Initiative. This helped them develop plans of setting up 1,500 access centers at libraries and other locations around the country. Our experience with MSPs was particularly useful for them in developing a project structure that ensures coverage for the center's long-term operations.

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