

Scotland **kilt**
its barriers to a
knowledge economy
and **plaids** the case
for e-learning.

Scotland E-Learning **Does**

When I stepped off the plane in Glasgow, I was a confirmed e-learning skeptic;
48 hours later, after visiting the Royal Bank of Scotland and Scottish University for
Industry, I was an evangelist.

By Samantha Chapnick

Scotland

is a best practice in action—well on its way from a country once characterized by a declining manufacturing job base and economic crisis to a nation of learners and knowledge workers through creative use of social programs and e-learning. Scotland is the perfect case study for any entity wanting to thrive in the knowledge economy—be it government, corporate, not-for-profit, or academic.

In 1980, Scotland, whose primary place of employment was the factory, lost one-third of its manufacturing jobs—300,000 almost overnight. With that disappeared the most important educational opportunity for a majority of the population: the apprenticeship. A person leaving mandatory education at age 16 could begin working at a manual labor job almost immediately in a quasi-apprenticeship role and participate in on-the-job training for several weeks or months. When that door to education closed, another one didn't open. That phenomenon isn't unique to Scotland; all over the world labor jobs have shifted to the areas and regions where labor costs are lowest. The challenge for Scotland was to manage the massive structural change and emerge as a modern competitive economy and a great place to live, work, and play.

A good example of the nature of that shift in work and learning is seen through Scotland's work structures and terminology. In the United States and other countries, a professional is someone who accepts money in exchange for performing a task (such as a pro athlete). In Scotland, the term *professional* is reserved for a narrow group of people such as doctors, lawyers (solicitors), accountants, and others who complete higher education before being qualified or licensed. The term *businessperson* is reserved for managers and others who work for companies. A *worker* is pretty much anyone else.

That hierarchy traditionally has held great influence over status and educational opportunities. A plumber who makes four times what a contractor makes and drives an expensive car is less respected and less likely to move out of his social class than the owner of the construction company. Institutes were established for people who were professionals or businesspeople. All professionals and businesspeople belonged to one of those institutes, which required continuing education and lifelong learning. Workers belonged to trade unions, which rarely required continuing education.

That contributed to an antipathy to education that's a serious individual and national disadvantage in any economy. At worst, combined with poor economic conditions, it excludes some people from educational opportunities, employment, and a basic quality of life that most people take for granted. Such "socially excluded" people exist almost everywhere, but the Scots have had challenging hurdles.

The Scottish e-learning strategy

When Scotland lost many of its manufacturing jobs in the 1980s, the government's initial strategy was to bring in foreign manufacturers—highlighting the low cost of labor and creating attractive incentive packages, including building new factories and offering tax breaks. That was an effective short-term strategy in that it created many low-paying manufacturing jobs. But the strategy was never intended to be long-term. Economic fragmentation continued as women working part-time filled many of those manufacturing jobs instead of full-time working men, who had been made redundant in the economic downturn of traditional industries.

With China, Eastern Europe, and India undercutting labor costs and the knowledge economy creating more demand for educated workers, the Scottish government did a 180 degree turn. Wendy Alexander, Minister for Enterprise and Lifelong Learning, says, "We weren't able to undercut on price. . . we were forced to change our competitive positioning. Manufacturing was the right solution for the 1980s, but the wrong solution for the first decade of the 21st century. Now, we're repositioning Scotland as high value. If we want to be a nation of earners, we need to be a nation of learners."

The Scottish Executive—Scotland's independent government, which wields all powers except defense, social security, and foreign policy—has merged two cabinet posts: Minister for Enterprise and Minister for Lifelong Learning. That sends a powerful message: The person who is looking after your job is also looking out for your skills development. On a policy level, the primary focus of the Scottish Executive is lifelong learning and enterprise. That sends yet another forceful message to the Scottish people and the world: The most significant policy-making position in the country values lifelong learning.

The driving forces behind Scotland's lifelong learning and e-learning initiatives:

Scottish Executive: Scotland's governing body with authority over Scottish policy except defense, social security, foreign policy, and some taxation.

Scottish Enterprise Network: Twelve collaborating but independent organizations serving as the primary economic development organization for Scotland.

Industry (Enterprise): Businesses directly involved in the creation and deployment of lifelong learning and e-learning.

Consortiums: Partnerships between the public and private sectors, often involving academia, to extend lifelong learning and e-learning opportunities.

Those groups working together have accomplished a lot in a short time. Scotland isn't unique in moving towards a new economic model, but what makes it stand out is its comprehensive, well-coordinated approach. That approach seamlessly incorporates resources, implementation speed, and intelligent strategy with elements such as

- an individual lifelong learning account with an initial balance of £150 for every Scot, including discounts (typically 80 percent) for learning focusing on certain subjects (such as IT, e-commerce, European Driver's License). The account holder can use the money for any type of learning (the study of antiques, college courses, subscription to e-learning materials), and tax breaks are provided for employers who add funds. In the first year, 100,000 Scots opened an account.

- Heriot-Watt University's Scholar e-learning program providing educational materials to students throughout Scotland and Malaysia. It grew from one user at inception to 40,000 in the first year. The program is the result of collaboration between many organizations, including Heriot Watt, Scottish Knowledge, and several further education colleges (similar to U.S. vocational institutes).

- Learning and Teaching Scotland in conjunction with 3Com (a communications company), Scot-sys, and the European Regional Development Fund spending £500,000 to create a publicly available e-learning communications facility, Netlearn.

- a lifelong learning campaign launched by SUFI and Learn Direct, which publicizes a free phone number that people anywhere in Scotland can call (most Scottish companies don't have toll-free num-

bers) to inquire about any aspect of lifelong learning or e-learning. Ads for the number are everywhere—buses, trains, taxis, television, and radio. In one year, the Learn Direct line has received more than 120,000 calls. It has also branded 300 Learn Direct Scotland learning centers (100 in so-called "socially excluded" areas).

- Royal Bank of Scotland working with Epic plc, an English company whose CEO is a Scot, has created



The Learn Direct line has received more than 120,000 calls in its first year.


several e-learning programs. Although the company doesn't pretend e-learning saves money, it believes digital learning enables the company to conduct seven times more training.

- Scottish Executive's Capital Modernization Fund (through a Learn Direct certification program) provides more than £8 million in grants ranging from £50 to £100,000 for any individual or group that meets an

extensive list of criteria to open learning centers that “will improve [access to learning], particularly through appropriate use of information and learning technology.” The funds cover such costs as hardware, software and licenses, telecommunications, training, and professional fees. Preference is given to centers assisting excluded groups. There are now 103 centers in factories and even at a football (soccer) club.

- Real, a collaborative partnership between Glasgow City Council, Scottish Enterprise Glasgow, and Glasgow’s 10 colleges and three universities, which aims to provide lifelong learning opportunities to all Glasgow citizens. Anyone can sign up for an account with free access to a wide range of interactive learning opportunities, either from a home computer or a Real learning center—cheerful places with helpful staff and state-of-the-art equipment. Centers are deliberately placed first in areas with populations that have been traditionally excluded from learning and advancement opportunities.

Scotland’s great formula for success

Some people view e-learning as if it can succeed in a vacuum, wondering why employees don’t log on Saturday afternoons to a site with more than 3,000 learning opportunities. More realistic people know e-learning delivers great ROI but is only one component of a larger system to create the right opportunities, methods, and ambiance for learning. One component is participants’ initiative and motivation to learn. Another is what priority learning has in the work environment. Are resources—financial, human, and physical—eagerly provided?  See Research Dog’s e-learning Readiness Assessment at www.researchdog.com.

There’s no one right formula, but there are a lot of wrong ones. Let’s turn our gaze to a few of the factors that make Scotland’s strategy for creating a system ripe for e-learning successful: partnership; community; psychology, sociology, and environment; and a holistic approach.

Partnership

The best way to develop varied types of learning is with small, manageable groups. Committees remind us of the “too many chefs” proverb. If you’re creating content to be delivered only in a classroom setting and only for a select, well-known population, less is more. A highly qualified instructional designer and a skilled graphic designer are enough to make a product

that a talented trainer can deliver in a compelling and effective way. If the product is a textbook, one author and one editor are sufficient.

In strong contrast, e-learning requires partnerships because it’s often designed for a wide audience, much wider than the one the developer may be in direct contact with. Having partners who know those segments of the audience will help make the e-learning more relevant and useful. Also, e-learning, by definition, involves using technology of some sort in addition to all of the traditional tasks involved in creating instruction. Rarely does one person have all of the skills of creation, distribution, and marketing, as well as technical aptitude.

E-learning is expensive. Arguments go back and forth as to whether it’s less expensive in the long run than classroom-based curriculums, but few people can deny that the up-front cost is greater. Sharing the cost will make products more effective and entertaining. E-learning is also relatively new so there are few experts, models, or case studies to emulate. Collaboration should include bouncing ideas off of other people, seeing samples of what has been done, bartering services and products, and staying apprised of new technology.

Scotland’s partnership advantage is its compact size. The community in any one industry, region, or area of expertise is small enough and geographically close enough that it’s almost impossible not to foster partnerships. Almost 90 percent of its 5 million citizens—2.6 million in the workforce—lives in the central belt, the space between and immediately surrounding Glasgow and Edinburgh. That’s akin to all of Europe living between Paris and Le Mans. In addition, the Scottish culture places a higher value on collaboration than individuality and competition. During the week I was there, every time I attended an event or a meeting I ran into at least one person I’d met before. The political and cultural systems are set up to foster interconnectivity between groups. The Scottish Executive is often the funding body or legislative driver. It appropriates funds for developing an agency or program to be administered by one of the agencies it established. One agency that receives funding from the government is Scottish Enterprise.

Imagine that e-learning in Scotland is a rocket. The government sets the target destination for the rocket. Wendy Alexander is the astronaut. The companies creating the e-learning and supporting technologies make up the body of the rocket. A network of organizations (colleges, universities, community

Scottish Enterprise

A glance at Scottish Enterprise's charter doesn't do the organization justice. An outsider could confuse the enterprise with a well-meaning local chamber of commerce that appears at ribbon cuttings but seems to do little else. A more accurate description would be champion, mentor, therapist, investor, matchmaker, realtor, patron, and friend. Established in 1990 by an act passed in the U.K. parliament, Scottish Enterprise was created to perform these functions in the 13 regions of Scotland:

- promote economic development
- manage government training programs
- develop, redevelop, and improve the work environment.

In the past year, the enterprise took actions that will add 22,000 new jobs and £900 million to Scotland's Gross Domestic Product, increase sales £820 million over the next three years, and help more than 7,000 new businesses start up. Crawford Beveridge, previous chief executive of SE and mentor to CEOs of such multinationals as Sun Microsystems and Autodesk, was instrumental in turning Scotland's economy around and influencing government policy. Under his guidance, the U.K. government has encouraged startups and commercialized academic research as part of its economic development

policy. Robert Crawford, the current CEO of Scottish Enterprise, has put e-commerce in the spotlight, emphasizing that moving your business towards electronic solutions is the most significant way to stay competitive. Charlie Watt, senior director of SE's e-business group, says, "Our goal is to make Scotland a global center of excellence." A significant part of that agenda is lifelong learning and e-learning. The e-business group made e-learning a key priority in May 2000. As a result, an e-learning group was established to meet with key e-learning stakeholders to "develop the necessary capability within Scotland to ensure that it assumes leadership in the creation, delivery, and management of e-learning." Or said another way, the goal is to see "60 percent of Scotland's workforce engaged in continuous learning."

Bob Christie, consultant to and former member of Scottish Enterprise, and Catherine Cairns, a member of SE's Lifelong Learning and Inclusion Directorate, have designed a Learn Direct program, created a community for e-learning stakeholders, and worked with Business Lab on a state of the industry report on corporate learning environments. Under the guidance of Frank O'Donnell, Scottish Enterprise has implemented a wide range of e-learning efforts,

including renting space to e-learning companies in SE-owned facilities at a reduced rate, thus creating opportunities for e-learning stakeholders to network and learn. Christie and Cairns also wrote and distributed educational materials and have hosted breakfasts and other events to bring together high-level Scottish policymakers such as Wendy Alexander, industry experts, and knowledgeable stakeholders such as Robert Crawford. Christie and Cairns have also raised awareness of e-learning opportunities for consumers through such organizations as Learn Direct and Learning and Teaching Scotland, and they've bought services and products of e-learning companies to provide them to the general population through such partners as Real Learning Centers and Learning and Teaching Scotland.

Specifically:

- More than £160 million has been put into skills and learning initiatives.
- More than 13,000 young people are working towards modern apprenticeships with on-the-job training that will increase their employability.
- More than £4.3 million has been given to the Scottish Learning Network initiative, which will set up 500 online learning centers in small and medium-size enterprises and 100 community centers.

centers, companies, and not-for-profit firms) are ground control. Scottish Enterprise is the rocket fuel, without which nothing would launch.

All rockets need a little Scottish Enterprise fuel. It's not the only group forming partnerships, but you can trace almost everything done in collaboration on e-learning or e-commerce to Scottish Enterprise and its funding, requisition of a product or service, networking, training, or facilities. SE has partnered with

- Lochend Community High School in Glasgow

and Training & Development Corporation to develop New Community Schools

- Heriot Watt University and a large European e-learning developer to create an e-learning organization
- 10 further education colleges to deliver online learning via broadband to learning centers throughout Glasgow and beyond
- Learning and Teaching Scotland to develop an online learning course
- Glasgow City Council, Scottish Enterprise Glas-



Real Learning Centers where people can drop in to socialize, use the computers, receive assistance, and learn

gow, and Glasgow Telecolleges Network to create learning centers around Glasgow under the brand name Real.

Community

I think a key reason the dot.bomb phenomenon struck U.S. e-learning companies was their disregard of a fundamental principle: People are social animals. The people driving the "revolution" in U.S. e-learning were technologists and bankers with tunnel vision. They believed the allure of the technology would make e-learning irresistible to consumers and it would be just a matter of time before everyone was logging in and learning.

Listening to the people driving e-learning in Scotland is an entirely different matter. Within minutes of opening a conversation, they focus on the community nature of learning, group dimensions of change, and the importance of looking at learners as members of a greater social network. Though many U.S. companies have learned to spout that discourse, it seems second nature for Scots.

The University of Industry, through its Learn Direct centers, provides one of the best examples of how employers can include community in their learning programs. The Scottish Executive set aside more

than £8 million to create or improve learning spaces that provide communities with education opportunities. SUFI, the administrator of the grant, is flexible regarding what type of organization can earn the qualification "Learn Direct certified" but is rigid in its criteria for learner access and quality standards. In other words, SUFI is eager to work with all types of groups that have an interest in helping people learn, but makes it clear learners are the top priority. During the application process, prospective organizations have to jump over several hurdles intended to ensure that Learn Direct's pledge to learners will be carried out in letter and spirit. One such hurdle is the self-assessment, Quality Indicators, which asks organizations to rate themselves through the eyes of learners on a number of tangible aspects. Example at right.

Real-life examples of how serious community is to all parties in the program are two current Learn Direct branded centers: UER, a car-axle manufacturer in Ayr, and an unemployment office in Glasgow.

UER. This leading manufacturer of axles for commercial vehicles in Europe set up an onsite learning center to help employees broaden their educational horizons. Many workers were restricted from traditional education because of their shift hours and a belief they'd never need to learn certain topics, such as how to use a



computer. At first, the employees used the center on their own, but it soon became a point of pride to be part of a qualification program. Vendors began sending representatives to educate the employees on the newest and latest techniques and technology. It became clear that UER was gaining more loyalty and appreciation from employees and the community by opening the center to employees' families and the larger community. UER says it has seen an increase in employee flexibility and motivation and an improvement in employer-employee relationships and now feels better

equipped to compete in the knowledge economy.

Milton Unemployed Community Resource Center. This Glasgow center is an ideal example of the importance of community. The center's manager aims to make it a place people can drop in for tea or coffee and feel like the member of a family. In fact, she says most people come in for the socializing. The center doesn't approach people aggressively, asking their goals, abilities, or timeframe, and lets newcomers roam freely and meet people already there. Tables form semicircles so there's no hierarchy or obvious leader-follower structure. People are free to drop in as many times as they like, as often as they like, before joining a class. Once they do join, the focus is on each learner supporting the others. Accomplishments are

judged by the learners, not the center's staff. One woman apologized that she'd taken a job as a cleaning woman and wasn't using the skills she'd learned at the center. But she thanked the center for giving her the confidence to look for a job.

Psychology, sociology, environment

In a culture in which technology is king and the killer app is the brass ring, e-learning is designed and deployed with technology and equipment in mind. The prevalent questions: What can it do? Which features should we include? How can we make it faster? Will it integrate with current systems? How scalable is it? Woe to the learning specialist, psychologist, instructional designer, or teacher who mentions learners' motivation, feelings, fears, learning styles, or self-esteem. The result is either e-learning options are never tried or don't have a long-term effect because people failed to identify with them or form a connection.

If there's a compelling reason to learn a topic, if e-learning's the only way to do that, and if learners are comfortable with the learning, just having good content may be enough. But most learning experiences in which e-learning is being used don't fit that category. You must address psychological, sociological, and environmental factors when the content is challenging, lengthy, or intimidating; when learners have a negative view of learning or are intimidated by the technology; or when learning conditions are difficult.

Scotland's e-learning players seem to have an intuitive sense of the need to create e-learning that provides emotional and sociological fulfillment. Two excellent examples are programs offered by Real Learning Centers; The Lighthouse, Glasgow's museum of design; and Royal Bank of Scotland.

Real is the brand under which Scottish Enterprise Glasgow, the Glasgow City Council, and Glasgow Telecolleges Network are working together to create learning centers. Those groups work with community centers (such as libraries and schools) in deprived areas of Glasgow to create learning labs where people can drop in and use the computers. The attitude is, get people comfortable with computers and excited about learning.

Step 1 is to make people comfortable physically. All of the Real centers are painted cheery colors and furnished with soft chairs—some have couches and lounge areas. The desks are big enough so two people can work together. The centers' staffs,

Learn Direct Scotland Quality Indicators:

We undertake to

- help you feel a part of a wider learning community
- put you in touch with other people studying the same things.

Evidence requirements: information and publicity materials; learner representatives included in review forums; learning center's social and recreational opportunities; access to other facilities such as library, information, and communications technology; database of other learners; learning center facilitator or tutor; and customer care and client satisfaction surveys.

Mark my word:

Because of Scotland's emphasis on the psychological and sociological aspects of learning, high-quality content, and effective use of technology, it could easily dominate the world market in e-learning.

who have other jobs, are available but don't hover. The computers are the latest models with large monitors, bright splash screens, and powerful processors. Step 2 is to involve people psychologically. They may have just dropped in on the way to the store. To hook those potential learners, the staff tries never to say no to the things the people attempt on the computers. Step 3 is to sell them on learning. A visitor can select an e-learning module onsite or log on and access custom programs from home.

A Real Learning Center staff member may approach someone and suggest interesting ways to gain more knowledge in whatever area he or she has shown an interest in. For example, some staff wanted to find a way to give the kids who come in to download MP3 files a possible career path. So, they formed a partnership with Scottish Enterprise and The Lighthouse to create e-learning modules on sound and video editing. Well and good for the not-for-profit world you may be saying, but corporate businesspeople don't have the time or inclination. Not so, said the Royal Bank of Scotland.

Royal Bank of Scotland sees e-learning as "merely a delivery mechanism" that's providing its employees with soft-skills and simulation e-learning. The bank works closely with Epic to develop its e-programs. One mind-blowing program was on how to get sales leads and up sell. Epic and RBS's approach went against conventional wisdom: Instead of hiring actors or buying an off-the-shelf product, it invested the money to create an experience far more realistic than the U.S. TV show *Survivor*. RBS held the workshop in a classroom and videotaped participants, introducing each one and having them say who they were, why they were in the class, and what they were hoping to get out of it. Then the trainers combined video clips of participants role-playing through each stage

of the instruction, multiple-choice options, and explanations of suggested choices. Instead of creating distance between the technology and learners by using scripted actors, learners are put in the place of the people in the role play, making the learning more memorable and more compelling. Of course, focusing only on the psychological and sociological aspects of a learning system is just as ineffective as focusing only on the technology. Balance is critical.

Mark my word: Because of Scotland's emphasis on the psychological and sociological aspects of learning, high-quality content, and effective use of technology, it could easily dominate the world market in e-learning.

A holistic approach

Imagine you go to a doctor complaining of chest pains. The doctor asks you to describe the pains, how long you've had them, and if you've tried anything to alleviate them. She selects a treatment that seems appropriate and off you go after paying a big fee. In some cases, the treatment will be effective; problem solved. In other instances, it won't help or will exacerbate the situation because the doctor didn't bother to find out information beyond the basics for diagnosis. You might have been better off if the doctor had taken a holistic approach and suggested you improve your diet, exercise regularly, and make other lifestyle changes. Many companies are taking a less than holistic approach to e-learning. But Scotland is creating a culture in which people seek learning—in which learning is something people do, not that's done to them. That's a lofty aspiration that can be too little, too late. Many countries see no contradiction in having children learn by rote memorization in over-crowded classrooms until they pass the right tests and then expect them to become innovative, take-charge leaders once they set foot in the workplace. Scotland is trying to educate children

to think critically, learn to apply general principles to new situations, and see learning as exciting and enjoyable. That mindset can make Scotland an ideal country for self-directed e-learning. If a company gives employees a subscription to an online learning site and leaves it at that, only the most eager self-directed learners will go there. But employees don't have to be so motivated if they are given space and time during work hours to learn, are partnered with other learners, and can review their progress with their managers. Still, learners who require less handholding or are more motivated will get more out of e-learning.

Don't forget curriculum

The Scottish school system isn't unlike the North American or other Western European systems from the perspective of not fostering self-directed learning. Traditionally, Scottish children have been expected to do what's assigned and leave it at that. Around the same time it became clear that manufacturing was dying, Scotland's government recognized that its education was outdated. The school system was difficult to change because it was decentralized. General curriculum guidelines were provided to 32 local councils, each of which had discretion to interpret the curriculum as it saw fit. That meant there were large differences in the schools depending on where they were, what the teachers were like, and so on. However, it also meant that the change could be tested locally before the monumental task of changing nationally.

Over the past few years, many new initiatives have been introduced to create self-directed learners. For example, subject matter covering problem solving and critical thinking provides children with the basic building blocks they need to succeed in the knowledge economy. Teachers are

encouraged to teach the same subjects in multiple contexts, in and out of the classroom, and to use new teaching methods.

Another example is that at-risk children are being converted into passionate learners by involving them in creating their own learning. New Community Schools is a collaboration between Scottish Enterprise Glasgow, Training & Development Corporation, and Lochend Community High School to "create and develop a learning environment—the aim of which is to support mainstream education and lifelong learning through information and communications technologies and advanced instructional strategies to empower teachers and students. Working together, students and teachers discover and develop competence. . . an opportunity to help engage, stimulate, and motivate all students to further develop the confidence and communication skills vital for their future participation in the labor market," as the program description says. The first school was established in Easterhouse, a section of Glasgow where unemployment is three times the national average and poverty is prevalent. In particular, a group of 33 high-risk children (those with low attendance, low self-esteem, occasional conflict with authority, and behavioral difficulties) were identified and invited, via a letter to their parents, to attend a three-week summer school session far more rigorous than what they were used to. Most accepted.

The children, working with the teachers and staff, designed the curriculum, the room (selecting the couches, pillows, and so forth), the food, and the technology options. The results were astonishing. Before the start of the course, their scores on a self-esteem test were almost all below the norm. By the end of the course, only one of the 18 students still scored low; 70 percent maintained perfect attendance. Almost all of the parents, many of whom had never been in the school, attended the open house to view their children's work at the end of the summer. And where there used to be vandalism, not one window has been broken since the program began.

Scotland has set some ambitious goals and is working hard to make them a reality. TD

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For More Information

● Scottish Enterprise's Learning Website

⌘ www.scottishenterprise.com

● Scottish Executive's Enterprise and Lifelong Learning Department

⌘ www.scotland.gov.uk/who/dept_enterprise.asp

● European Commission's eLearning

⌘ <http://www.europa.eu.int/comm/education/elearning/what2.htm>

● National Grid for Scotland's education links & newsletter

⌘ www.ngflscotland.gov.uk/mailbulletin/current.asp