Glasgow the Learning City: Lifelong Learning and Regeneration

March 2001

Jonathan Clark Scottish Enterprise Glasgow

Networking Scotland in Europe

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www.scotlandeuropa.com

SCOTLANDEUROPA

Scotland Europa Scotland House Rond Point Schuman 6 B 1040 Brussels

> Tel: +32.(0)2.282.8315 Fax: +32.(0)2.282.8300

E-mail: sandra.paolilli@scotent.co.uk Website: www.scotlandeuropa.com

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John Edward EU Policy Advisor Scotland Europa Scotland House B-1040 Brussels Tel: +32.(0)2.282.8315 Fax: +32.(0)2.282.8300 e-mail: john.edward@scotent.co.uk web: www.scotlandeuropa.com

We look forward to hearing from you.

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Preamble

One of the UK's most celebrated authors is opening a new educational association set up by some of Glasgow's young business people. They are attempting to fill the educational vacuum that exists between the technical institute and the University. Based in the city centre, the new association will provide more than 2,000 students with commercial and technical classes as well as lectures on philosophy, drawing, geography and languages. The association's buildings are exceptionally well equipped with a library, gymnasium, theatre and concert hall. But this is not 21st Century Glasgow. The year is 1847, the author is Charles Dickens and the association is the Glasgow Athenaeum - initially based in Ingram Street and later in St George's Place. The Athenaeum was ultimately the progenitor of both the University of Strathclyde and the Royal Scottish Academy of Music and Drama.

The challenge faced by the Athenaeum's founders to develop the city's education system and its ability to equip them for the contemporary labour market of the mid 1800s has striking parallels today. Once again the city is facing economic change as it establishes itself in a global knowledge economy. While change is not unique to our generation, the pace of change has rapidly increased over the last 150 years. For example, one day's activity in 2001 is equivalent to all world trade in 1949, all scientific projects in 1960, all telephone calls in 1983 and all e-mails in 1990. A consequence of the rapid increase in the rate of change is the commensurate increase in the rate at which the skills and knowledge of individuals decay and become obsolete. The challenge for Glasgow today is to capitalise on the opportunities presented by the knowledge economy and build a skilled and adaptable workforce able to benefit from the extensive learning opportunities the city can provide.

Introduction

The following paper sets the context for, and provides the background to the development of the 'Real Partnership' - a unique collaboration of organisations¹ involved in providing lifelong learning to the citizens of Glasgow. The paper consists of two main parts, the first of which lays out the macro policy environment and provides an overview of the economic and social challenges facing Glasgow. This initial section also raises the question of what lifelong learning means and what contribution it can make to the development of the city. The second part of the paper starts with the roots of the Real partnership before providing a description of the paper startegic issues facing the partnership as it enters its next phase. Overall, the paper argues that the new challenges facing Glasgow require a radically new policy response if it is truly to become a learning city.

¹ Glasgow City Council, Scottish Enterprise Glasgow, University of Glasgow, Strathclyde University, Glasgow Caledonian University, Glasgow Colleges Group and Learning & Teaching Scotland.

Part 1. A City of Opportunity - Building the 21st Century Workforce

- Learning in a Global Economy

"We need to foster a flexible education system - one that integrates work and training and that serves the needs of both experienced workers at different stages of their careers and of students embarking on their initial course of study"

- Alan Greenspan, Federal Reserve Board Chairman

Glasgow enters the 21st Century as a city having shed its industrial past while developing as an international business location within a knowledge based global economy. As such the city faces the common challenge of post-industrial economies to create a skilled and flexible workforce. In this context the sentiments of Alan Greenspan resonate in Scotland as strongly as the United States. The recently published paper 'A Smart, Successful Scotland: Ambitions for the Enterprise Networks' clearly sets out the importance the Scottish Executive attaches to the development of human capital as a means of increasing productivity and creating a competitive advantage for the nation. This concern is shared by the European Union (EU) and, more generally, by many other successful economies.

The Scottish Executive's strategy is consistent with the EU's own priorities set out in the Amsterdam Treaty and, more recently, in the conclusions of the Lisbon summit which stated that "people are Europe's main asset and should be the focal point of the Union's policies.... (and) lifelong learning is an essential policy for the development of citizenship, social inclusion and employment²." The development of government policy in the Nordic states (with an emphasis on knowledge, innovation and value added through learning) is of particular interest in post-devolution Scotland. Denmark and Finland both offer relevant examples of a strategic approach for the creation of a skilled workforce for the 21st century. Finland has a national strategy articulated in 'The Joy of Learning'³. This sets out the need to continually reappraise the relationship between skills, learning and the labour market and the importance of strong relationships between the government, industry and the providers of learning.

Further afield, both the United States and Singapore have published strategies to address the skill requirements of their countries in the 21st Century. 'Manpower 21'- the Singaporean strategy acknowledges the critical importance of knowledge driven industries in creating a competitive advantage on both the economic and social fronts. The Prime Minister of Singapore, Goh Chok Tong, states in Manpower 21 that "We will have to evolve a comprehensive national lifelong learning system that continually retrains our workforce, and encourages every individual to learn all the time as a matter of necessity. We must have a thinking and learning workforce." Although not abandoned, there is a subtle move in emphasis away from comprehensive manpower

² European Council Presidency Conclusions, Lisbon 23/24 March 2000

³ http://www.minedu.fi/minedu/publications/online.html

planning in Singapore towards a greater responsibility on the individual to adapt to the prevailing labour market conditions.

Policy developments in Singapore mirror the move in the United States from a notion of 'employment for life' to 'lifelong employability' - arguably one of the core concepts of lifelong learning. Such a move implies that all workers are aware of changes to their industry, their local economy, perhaps even the global economy and that they will subsequently be able to adapt their skills and experiences to add value to their employer. In the United States the 21st Century Workforce Commission describe the need to develop a '21st Century Literacy' - a set of competencies that include strong academic thinking, reasoning, teamwork skills, and proficiency in the use of technology in order to develop a healthy economy in the 21st century.

To thrive within a highly competitive global environment Glasgow needs to build a flexible and responsive approach to facilitate the development of a culture of lifelong learning, and the creation of the infrastructure and content to support learners in gaining and retaining new skills for the 21st Century.

Lifelong Learning - The Holy Grail?

"Lifelong Learning is all things to all people: the Holy Grail, a lottery win, a double Scotch, Viagra - whatever turns you on"

- Maggie Woodrow, University of Westminster

In an increasingly complex world where both the scale and rate of change have increased, many old certainties have disappeared and lifelong learning has been heralded as a panacea not only for curing economic ills, but also meeting social and personal challenges. The European Year of Lifelong Learning in 1996 signalled a change in the language of policy in the UK from 'vocational education' and 'adult education' towards lifelong learning. In the United Kingdom more than a dozen white and green papers have been published on the subject. Indeed, the previously independent departments of education and employment were merged, and the UK now has a minister of lifelong learning. It should be noted that in Scotland the areas of education and enterprise are devolved to the Scottish Parliament which was established in 1999. As a result of devolution education and lifelong learning (& enterprise) were split back into two separate ministries.

Within the Scottish context lifelong learning remains largely focussed on post school vocational, adult and continuing education. With a variety of organisations involved in developing policy and implementing actions, there are numerous agendas creating a challenge in setting and communicating a coherent strategy for lifelong learning at both national and local levels. Despite the proliferation of conferences and papers on the subject, it would be dangerous to assume that everyone knows what lifelong learning a policy, a principle, a process or an attitude? A graver risk is that the confusion over the definition and scope of lifelong learning will deflect attention from the very real

role that education, training and learning have to play in ensuring the economic and social wellbeing of Glasgow. One of the functions that the Real partnership can enable is the provision of a forum in which the key organisations can 'make sense' of the complex strategic landscape and translate this into innovative solutions.

- A Tale of Two Cities

"For decades, professional, well-heeled citizens have been flooding out of a city still reeling from the collapse of the heavy industries that were once its lifeblood. During the 1980s, 40,000 manufacturing jobs were lost and although the tide is turning, unemployment in the city still stands well above the Scotland wide rate."

- Susan Flockhart, The Sunday Herald

In setting the context for Glasgow - The Learning City, it is important to emphasise that the challenges facing the city are not solely economic and furthermore, that any strategy is able to build upon some very positive foundations. There is a strong sense that Glasgow has turned the corner and there is ample evidence to support this assertion. Glasgow is Scotland's largest city and the third largest in the UK with a population of 612,000 at the centre of a metropolitan area of over 1.3 million people. Outside London it is the UK's second largest retail centre and has an international reputation for arts and culture. This was boosted by its status as UK City of Architecture and Design.

In economic terms the city has recently enjoyed the highest growth in employment of all UK cities outside London. This equated to some 25,600 net new jobs created between 1996-1998. Consequently the unemployment claimant count has been reduced by some 51% since 1991. The economic growth is largely due to:

- continued inward investment success in the areas of financial services, software & information and communications technologies have seen more than 90 inward investors locate in the city since 1992. These include companies such as Unisys, JP Morgan, Excell Multimedia and Level 1 Comms.
- tourism growth has seen Glasgow become the third largest visitor centre in the UK after London. In 2000, tourists made 47,000 trips to Glasgow, spending some £635 million per annum.
- growth in computer based businesses saw the number firms increase by 87% between 1995-1999 and employment increase by 221% between 1991-1998.

However, Glasgow's population has almost halved since 1938, falling from 1,127,825 to 616,430 in 1996. More than 42% of its citizens currently live in areas of deprivation, and the city has more than 78% of Scotland's most deprived areas. As a consequence of multiple social and economic deprivation:

- an estimated 7,000 10,000 people inject drugs.
- the rate of low birth weight babies is 23% higher than the Scottish average.
- average female life expectancy is five years shorter than the English average and the male average is six years.
- Claims of Disability Living Allowance (DLA) claims in Glasgow among the 16+ population are 54% higher than the Scottish average at 8.4%.
- Income support among the city's 16+ population is 18.8% against a Scottish rate of 10%.

It is of little surprise that this duality is reflected in the skills and competitiveness of the city's workforce. At one level Glasgow is a recognised centre of excellence in terms of Higher Education. The city is home to 42% of Scotland's Higher Education student population and the city's 5 Higher Education Institutions represent the largest concentration of Scotland's teaching grants awarded by the Scottish Higher Education Funding Council (SHEFC).

The Universities of Glasgow, Strathclyde and Glasgow Caledonian have many areas of teaching and research excellence. The University of Strathclyde has key strengths in Engineering and Science with research in areas such as telepresence, vision technology, ultrasonics, manufacturing design, systems and technology. The University of Glasgow is a major broadly based research-intensive University with particular strengths in Computing Science and in the Life Sciences such as immunochemistry, neurology and heart disease. All of the city's universities perform well in the area of Computer Science, Glasgow has a world class research profile with a 5* RAE rating for example. Glasgow Caledonian has the fourth largest Business School in the UK and is a world leader in Risk Management.

Table 1: ⁴	
Total FTE higher	education
students 1998/99	

Rank	City	Total
1	Manchester	70,420
2	Glasgow	56,077
3	Birmingham	42,929
4	Sheffield	42,693
5	Edinburgh	40,734
6	Leeds	40,568
7	Nottingham	37,356
8	Leicester	35,593
9	Liverpool	34,635
10	Bristol	34,385

Table 2:
Total FTE postgraduate higher
education students 1998/99

Rank	City	Total
1	Manchester	11,218
2	Glasgow	9,417
3	Birmingham	7,772
4	Leicester	7,556
5	Sheffield	7,088
6	Edinburgh	6,898
7	Leeds	6,578
8	Oxford	6,025
9	Bristol	5,748
10	Liverpool	5,531

⁴ Tables 1 & 2 - source: Higher Education Statistics Agency

Table 3: Student Numbers and UK ranking of Glasgow University For life sciences subjects

Subject	Total Students	UK Rank	
Total Life Sciences	5,935	5	
Medicine and dentistry	2,110	6	
Allied to medicine	1,324	56	
Biological sciences	1,961	2	
Veterinary science	540	3	

Source: Higher Education Statistics Agency

The city is also home to a thriving Further Education sector with 10 colleges serving the various communities within the city as well as providing specialised vocational training. The colleges are 'connected' via the Glasgow Telecolleges Network (GTN) which provides a broadband communications network. This compliments the city's Metropolitan Area Network linking the Higher Education Institutions.

Set against this background of excellence in Higher Education, it is estimated that one third of the city's workforce have no qualifications. This is combined with 11% of school leavers entering the labour market without a qualification and a further 17% entering with poor levels of qualification.

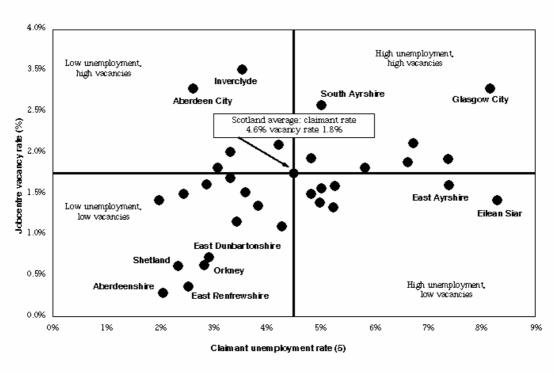
Qualifications		In	In Training	In FE	In HE	Unemployed	Totals
		Work					
3 Highers or							
more	1	68	3	61	724	28	884
4 S Grades to 2							
Highers	2	504	74	443	238	208	1467
1-3 S Grades at							
3+	3	427	111	352	2	319	1211
S Grades at							
4-6 &/or modules							
	4	87	119	208	0	321	872
S Grades at 7 &							
no quals	5	87	106	65	0	307	565
Totals		1310	413	1129	964	1183	4999

Table 4:Destinations by Qualifications Held - 1999

Source: Glasgow Careers Service

Today, Glasgow's labour market bears little resemblance to that known by previous generations. Apart from a change in the sectoral profile of employment, there is an emerging challenge presented by growing vacancy levels for low skill jobs coupled with relatively high levels of unemployment within the city. In effect many Glaswegians do not have the skills to compete effectively for jobs in the city - even unskilled jobs. This has led to the setting of a strategic target of securing 50% of new jobs for city residents by 2005.





Source: Scottish Executive

However, the practical challenges faced by the city are not simply economic. Despite the rising levels of prosperity and the economic success of the last decade, there has been significant social change. This has sometimes been problematic and has manifest itself in family breakdown, changing attitudes to personal relationships and work, and social exclusion.

Increasingly public sector provision of education and training in the UK, and many other post industrial nations, has come under attack for failing to cope with the impact of the economic and social changes outlined above. Employers in the private sector are dissatisfied with the employability of school leavers and new graduates and in many cases referring to the 'remedial education' necessary for their new recruits. In the social dimension the media criticise the failure of schools to prepare young people as citizens who will actively contribute to a democratic and inclusive society. It is in this context and in order to position ourselves to meet the global and local challenges set out above that the Real Partnership was formed.

Part 2. Glasgow's Learning Future – New Solutions to New Challenges

- The Acorn

"The Scottish Executive is committed to building a lifelong learning nation where individuals and businesses have the opportunity to flourish through education.

In Glasgow, this vision is being taken forward by a unique partnership which spans further and higher education, local government and the Scottish Enterprise Network. This partnership aims to transform Glasgow into one of Europe's Learning Cities, where first class education and training resources are developed to release the potential of local people."

- Henry McLeish MSP, First Minister

Scotland Street School Museum is situated south of the river Clyde in the Govan district of Glasgow. Designed by the architect Charles Rennie Mackintosh, the school was built in 1906 as a response to an increase in the number of school children after the Education (Scotland) Act of 1872. Under the Act, education for all children under the age of 13 became compulsory. The industrial revolution had created the demand for people who were literate, numerate and who had been sufficiently 'socialised' for work in factories. As a consequence, during the 1800s more than 300 schools were rapidly developed in Glasgow. This contrasted with the position from the middle ages till the 19th Century when the city had only one school. Scotland Street School therefore symbolises both the universal right of Glasgow's citizens to a free education and the response of a previous generation to the challenges of rapid industrialisation and the social changes it brought.

During August 1999 a meeting was held in Scotland Street School with representation from Further and Higher Education, the City Council, and Scottish Enterprise Glasgow. The principal public sector providers of academic and vocational education and training in the city - organisations with a combined annual expenditure of £930m. The purpose of the meeting was to ways of co-ordinating the development of a network of local learning centres across the city in response to the emerging national agenda for lifelong learning. At the meeting there was a consensus that by collaborating and working in partnership, duplication of effort could be avoided and value added in the development of new learning environments to meet the city's aspirations for the 21st Century.

This group developed into what is now known as the Real partnership. In less than 18 months the organisations represented at Scotland Street School have coalesced into an effective working alliance, the aim of which is to provide Glasgow's citizens with the highest quality learning possible at all levels and in accessible ways. The partners

aim to achieve this by exploiting the economic leverage of the strong 'educational' cluster in the city. By developing new products and services and effectively deploying existing ones this will allow the citizens of Glasgow to undertake meaningful 'learning journeys' - an idea developed later in the paper. The aspirations of the partners are set out in the prospectus 'Living and Learning in Glasgow' published in February 2001. Moreover the partnership is about action as much as aspiration. Table 5 summarises the main achievements of the Real partners during what was effectively the first phase of development. Much of this work builds on the results of customer focussed research in the guise of a citizens' jury and a MORI survey which examined the attitudes and behaviours of Glaswegians towards learning.

Table 5: Phase 1 Development			
Area of Development	Progress to March 2001	Target March 2002	
Community Based Learning Centres	9	32	
Business Based Learning Centres	60	120	
University Based Learning Centres	0	1	
College Based Centres	0	5	
School Media Labs	1	5	
Brand	Developed	-	
E-learning environment	Develop & deploy e-learning environment	Evaluate	
On-line qualifications	7	30	
Web Portal	Specification complete	Developed	
Metadata Repository	Specification complete	Developed	
Membership of Real	Develop	Evaluate	
Monitoring System	Develop & implement	Evaluate	
Quality Framework	Develop & implement	Evaluate	
Broadband Connectivity	Integrated educational network	-	

Table 5:	Phase 1 Development
	-

Building Learning Journeys

I've got some work to do with myself and my skills. All those things in my CV about being a team worker and able to use my initiative and work unsupervised are not true! Now I can honestly say I'm trying to be those things and know what they really mean.

- A Glasgow Learner

Although it is important to set the development of the Real partnership within global, economic and historical contexts, it is through the lens of the learner that the partnership takes form. Based on the experiences of current members of Real, two vignettes of learning in the city are set out below to illustrate the experience of living and learning in Glasgow today.

Learning Journey 1 - The first learning journey starts in a class at a Glasgow secondary school where advice is being given about career opportunities in the city's new industries. At the end of the session the pupils are given multimedia 'digicards', produced by Real, containing information about the labour market and the world of work in the city. The pupils are told that they can use the cards in the school's Real media lab.' or in one of the Real centres across the city. One of the pupils, a sixteen year old boy called Andy, decides to visit a Real centre located in the community library near his home.

The centre doesn't look the library Andy remembers as a young child. It is bright and has soft seats, lots of technology and even a drinks machine and there are many other people using the centre. Andy can book a free session on the computer to use his digicard and access the Internet even though he isn't a member of Real. He picks up some information about becoming a member - attracted by the design. The leaflet is taken home and read some days later by his grandfather.

The 84 year old is interested in the courses mentioned in the leaflet and goes to the centre to find out more. After some discussion with one of the lifelong learning librarians, the grandfather decides to enrol on a local history course. He becomes a member of Real and receives a membership pack that includes a learning guide full of useful tips and advice on learning styles and other techniques to help him through the course. Feedback through a mystery customer exercise has already revealed the need to simplify the registration and enrolment process for learners. Now, everything can be done in the centre and less than a week later the course has started. It is run via the Internet where there is a group of eight people studying together on-line. The tutor is on the other side of the city, but can be contacted any time by e-mail and frequently takes part in the chat forum with the students.

Learning Journey 2 - The second scenario takes place across the city in a drinks production factory. The HR manager has been asked by the company's board to set up a learning centre - they are concerned that the firm needs to improve the skills of the workforce. The HR manager has heard about the Real: Business Learning Centres

via a local trade association. They contact the Real project team who help the company design and develop a new in-house centre, complete with high speed internet access and the latest multimedia technology. Staff are asked to volunteer to become learning advocates - championing learning within the workplace and supporting their colleagues. 25 staff receive training and some become qualified tutors.

During an induction to their new centre, employees in the factory are encouraged to become members of Real. Their details are entered onto a database together with those of the other members recruited through the community based centres. A few weeks after becoming a member of Real one of the employees at the factory receives information on a qualification on health and safety available on-line. The membership database allows information to be targeted according to the interests and preferences of individuals. Learners can progress from vocational qualifications onto higher education course offered by colleges and universities in the city.

Many of the workers in the factory bring their children to study in the centre at weekends and after school. The children can access advice on homework using the Internet and are able to attend various programmes run for them in the community based centres. Some of the worker's children are attending a four week programme to develop their technological fluency and they are learning to work as a team. They are building and programming robots using technology developed for NASA. During the programme they have to create a web site showing their research on the subject of space. They have borrowed books on space from the library and have written poems and short stories to enliven their web sites and develop literacy skills.

Learners access physical and virtual environments with familiar and consistent branding. These environments, together with the materials developed and distributed through them, are subject to rigorous quality checks and a continuous enhancement process to ensure that a consistently high level of service spans the activities of the partnership. Increased usage of centres and positive feedback from learners has been encouraging, but it is only a starting point.

- Forward Motion

At the outset, the aims and aspirations of the Real partnership were rather modest and broadly limited to the development of a network of learning centres and the associated ICT networking infrastructure. Over the last 18 months the partnership has matured and entered a second phase. During this time the operational focus has evolved, and development of content and programmes has been undertaken with some measure of success. Quite rightly this 'stretching' of the original aims has raised question over the purpose and goals of the partnership. The articulation of a set of explicit, rather than implicit, goals is now a matter of priority. In their absence the monitoring of progress, evaluation of impact and attainment of quality is impossible.

The process of developing goals will present a significant challenge for the partnership since it requires the resolution, or at the very least acknowledgement and acceptance, of some significant contradictions and tensions. Beyond the competing priorities of the core partners, the development of national policy will also impact on

the goals as will the heterogeneous needs of the city's people - the partnership's core customers. At the national level there is little political consensus on the purpose of the education system as a recent survey of the Members of the Scottish Parliament (MSP) illustrated⁵. A divide still exists between those advocating a 'classical liberal' education and those who support a more 'vocational' model. For example, only 11% of the MSPs surveyed mentioned lifelong learning in their responses. It could therefore be assumed that lifelong learning continues to be seen as the domain of adult rather than primary and secondary education. Individual interpretations of lifelong learning outlined below show the over simplicity of this assumption.

Phil Hodkinson - Professor of Lifelong Learning at Leeds University, identifies two current policy approaches to lifelong learning. In the first, learners are held up as model, upright citizens who are in regular employment (presumably through their ability to acquire new skills). He is concerned that this develops a moral imperative to learn so that one's family, employer and country are not let down. Lifelong learning has in effect become a means of social control - a means of socialising individuals. In the second, lifelong learning is presented as a linear continuum in which building the educational foundations to allow progression to further and higher education is the key aim. Once the learner has passed through college or university their commitment to lifelong learning would be assured. In this approach lifelong learning is an absurd concept since goals would focus on enhancing the education of those at school and providing remedial opportunities for others who had not succeeded at school.

The danger of equating lifelong learning 'with an extension of the early pathways' that start in primary school is also identified by Kathryn Ecclestone from Newcastle University. In this case lifelong learning may become no more than a series of plasters, patching up the shortcomings of the existing system. Ecclestone goes on to state her belief that "In its most liberal sense, lifelong learning arises from a positive, satisfied proactive role in the community, at work and in the family".

These diverse views on the rationale and the role of lifelong learning illustrate the challenge of developing meaningful goals that are more than platitudes. Beyond the individual and institutional perspectives on lifelong learning, there are other drivers that create the need to challenge i.) the framework of policy development and ii.) the models for conceptualising and organising the partnership. In other words, the way in which goals are developed and subsequently delivered is critical.

Strategic driver 1 - is the protean nature of cities. Cities are dynamic and ever changing, thereby evading simplistic approaches to the development of policy and 'top down planning'. Glasgow's past is made up of the histories of the villages, neighbourhoods and districts that now form the city and the citizens whose lives shaped each of these areas. So its future will be created by the individual and collective endeavours of Glaswegians. It is unlikely that any single, conventional, strategy could succeed in meeting the diverse range of aspirations, or harness the unique talents and creativity, of the city's citizens. In the autumn of 2000, staff from the partner organisations were involved in a scenario planning exercise which sought to develop a number of alternative views of the city's future.

⁵ Times Educational Supplement, December 1 2000

During the process of creating the scenarios the group identified some key uncertainties/questions:

- Will Glasgow be recognised as a positive brand?
- How will Glasgow overcome poverty and combat social exclusion?
- Will the bureaucratic system change?
- Will Glasgow be a good place to live?
- Can the learning infrastructure adapt to the shifting sands quickly?

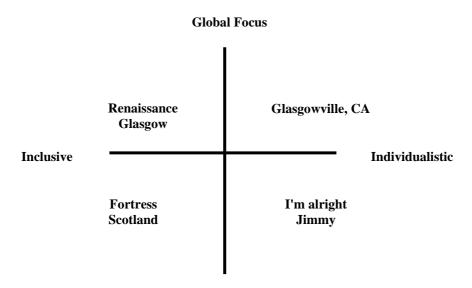
- Can we develop an entrepreneurial 'can do' culture?
- Will specific events affect 'feel good' in Glasgow?
- What will happen if Glasgow doesn't compete in the knowledge economy?
- Learning for jobs or learning for life?
- Can Glasgow anticipate technological developments?

Following a process of refinement, the group identified the two most important questions as:

- will Glasgow be a socially inclusive city or will individual market driven values prevail? and,
- will Glasgow look outward and adopt a global focus or will it concentrate on local markets and opportunities?

These questions or uncertainties were then built into the following scenario matrix and a set of four associated story lines that are set out in Appendix 1. The process illustrates one of the steps being taken to reflect the complexity and diversity of the city in a multi-dimensional model, albeit a simple one.

Figure 2: Glasgow's Learning Futures



Strategic driver 2 - is the nature of learning as opposed to education. One of the key differences between the two is that while education can be legislated for and guided through public policy, learning is an innate human characteristic. Learning does not automatically occur because of a promotional campaign, the development of new qualifications, or the construction of new buildings. It thereby evades control and direction through abstract policy. While recognising that good education involves learning, the 'organic' nature of learning contrasts with the sometimes mechanical and linear nature of education. This presents a major challenge in the creation of goals that reflect the individualistic and non-linear nature of learning and at the same time acknowledges the valuable role that education has to play. In this context the metaphor of the 'learning journey' recognises the fact that learners are travelling in different directions, at different speeds and in different ways. It also implies that learners are in control of the experience in an active way – important in countries like Scotland, where so many perceive education as something that "is done to you" by others.

One of the recurring themes of this paper has been the influence of the knowledge economy on the city and its labour market. The ability of individuals to create and use knowledge is therefore an important source of competitive advantage for Glasgow. However, some way of linking the goals of the city with those of the individual is needed. This could be achieved in the form of a 'lifelong learning curriculum'. Not to be confused with an institutional based 'teaching' curriculum defined by attendance and content; it would not embed learning in a specific context or depend on transmission from teacher to pupil. It would, however, provide a framework to equip learners to understand the factors that shape the context(s) within which they live, work and learn.

In this approach, theory and practice cannot be separated since learning requires to be situated, and seen as part of a whole. Furthermore, an 'action based' approach is necessary so that the learners are able to apply their knowledge in new situations and consequently develop the ability to critically review their prior knowledge and experience. By adopting such an approach, a lifelong learning curriculum would effectively blur the boundaries between academic and vocational learning. What would such a curriculum look like?

The RSA (Royal Society for the encouragement of Arts, Manufactures & Commerce) have been developing a curriculum for the 21st century, challenging the traditional approach to the development and implementation for secondary education. Although this work was initially undertaken within the context of redefining the school curriculum, the general approach holds lessons for the wider area of lifelong learning. The curriculum set out in Appendix 2, has five broad categories each of which contain a number of individual competencies. These are expressed in terms of what learners could achieve if they passed through the curriculum. The five areas are:

- I. Competencies for Learning
- II. Competencies for Citizenship
- III. Competencies for Relating to People
- IV. Competencies for Managing Situations
- V. Competencies for Managing Information

There is clearly a lot of work to be done in the development of such a framework especially one designed for lifelong learning. Initial work on implementing the RSA curriculum has thrown up some important issues such as the balance between process and subject specific outcomes; the weighting of individual competencies; the need to value the different ways people learn, and the method of assessment.

Strategic driver 3 - the emergence of a 'networked world' is changing the delivery of education and learning across the globe. It is estimated that 720 million people will be using the Internet by 2002, that the market for on-line training and education will grow at 75% a year for the next five years and that over the next 30 years as many people will be seeking formal qualifications since the dawn of mankind. The advent of the World Wide Web and the increasing sophistication of telecommunications technology have allowed providers of learning to span both national and market boundaries. Creators of corporate universities and internet based private universities have exploited this technology and numerous new models of delivering 'on-line' education and learning exist. These developments challenge the partnership to create goals which acknowledge the impact new information and communications technologies will have on three spheres of lifelong learning, namely – pedagogy, strategy and management.

At the pedagogic level, institutions can now create courses that take into account the preferred learning style of the individual. Varying degrees of collaboration and differing modes of interactivity can increasingly be built into e-learning content. Standards for storing and reusing materials are being developed through projects such as ARIADNE and IEEE. The subsequent development of metadata standards and repositories will accelerate the ability to customise materials to meet the needs of the learner. In this sense e-learning is not synonymous with either open learning or distance learning. Corporate universities such as CISCO and private providers such as Click2Learn, DigitalThink, Smart Force and so forth illustrate the emergence of the 'any where any time' learning model.

From a macro strategic perspective, the learning sector in Glasgow faces a threat from the estimated 5,000+ commercial e-learning businesses providing products, services and content to a growing market forecast to reach some \$11.4b in the USA alone by 2003 (a CAGR of 83%)⁶. How will the city respond to the challenge of highly competitive and increasingly sophisticated cross border competition? New forms of collaboration between the private and public sectors are being developed to create and distribute learning thereby changing the nature of the market – threatening the city's market share. An effective response will demand openness to new approaches, a strong focus on global trends and the ability to work with external partners in both the public and private sectors. In this context there is a need to build a cluster of skilled individuals in the city who can develop content and support e-learners. This will require a critical appraisal of the pedagogic methods employed to exploit this new medium. Development of the Institute for the Knowledge Economy at the University of Strathclyde should start to provide greater understanding of these technologies.

From a micro perspective, increasingly pervasive broadband technology in the form of ADSL, cable and satellite will allow the distribution of media rich e-learning to a

⁶ source: International Data Corporation estimates

growing number of households and businesses. However, access and the issue of 'digital exclusion' is an important consideration. Despite the evidence of increasing access to the Internet in all socio-economic groups, there are still low levels of Internet access among economically disadvantaged households. This is another strategic issue which require consideration. The two examples outlined above illustrate the tension in developing goals which reflect the specific needs of the Glasgow while responding to global competition – the tension reflected in figure 2 (page 13.). Such a complex, and arguably chaotic, environment requires a new approach to the management of the partnership.

Last, but by no means least, is the task of managing and organising a complex partnership in a chaotic, networked world. Taking the hierarchical structures common to most of the partner organisations within Real and transposing as a means of managing a highly complex network is unlikely to succeed. This is especially true given the different levels on which the partnership operates on both an interorganisational and extra-organisational basis. An alternative approach which recognises the non-linear and organic nature of the partnership is required. Such an approach should promote self-organisation and distribute power to the most appropriate part of the network. Dee Hock the creator and former CEO of the VISA card network suggests a general approach to the management of complex organisational structures in his paper 'The Chaordic Organisation: Out of Control and Into Order'. In this paper Hock outlines a number of important principles which emerged through his experience developing VISA, some examples are:

- Power, function and governance must be distributed to the maximum degree.
- All participants must equitably own it.
- It must be infinitely malleable yet extremely durable.
- It must embrace diversity and change.

Essentially the partnership's main source of leverage is the ingenuity and creativity of the staff who work for the constituent organisations. In order to liberate this talent, the partnership needs to show leadership and build confidence. A significant goal!

Conclusion

Despite the challenges facing the city and the substantial task the Real partnership faces in 'providing Glasgow's citizens with the highest quality learning possible at all levels and in accessible ways', there is a sense of optimism born from the initial success of Real. This needs to be captured and built upon to assist in the regeneration of the city.

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Appendix 1

Scenario Story Lines

1. Renaissance Glasgow

Glasgow has reinvented itself. The city enjoys a high standard of living and a vibrant culture and is a place where young people and families alike feel safe. Glasgow has truly embraced the knowledge economy and has achieved competitiveness by looking out towards new opportunities, while at the same time looking after the less advantaged members of its society. Glasgow's economy is structured around its (mainly small, independent and innovative) company base. Overall, employment is better than at any time in the last 15 years, with 95% of the labour force working in key sectors (education, leisure, health, financial services, consultancy, software development and human resource management). Much of GDP comes from knowledge based activities and the city has the infrastructure and the skills within its population to thrive in the knowledge economy. Glasgow has used the Internet to develop a strong niche in e-learning. The REAL Partnership – a partnership between the public and private sectors – is an internationally recognised brand which exploits innovative ideas - from Glasgow and elsewhere - to deliver on-line learning to the world. It is an important player in the global learning industry, generating £5bn in revenue each year.

Increasingly, demand is for high-level core skills such as languages and technician skills, team working, IT skills, communication, interpersonal skills, resilience, problem solving and customer care. Technical skills – such as welding, riveting and other 'traditional' skills -are less in demand. Glasgow, as both teacher and learner, has made the transition successfully. That's not to say that competition is not fierce, however. The marketplace for global education is highly competitive, with corporate universities, national media companies and private sector training consultancies all pitching in.

Providers face the never-ending challenge of continual and increasing demand for educators and facilitators of learning and Glasgow works hard to ensure that it can continue to meet demand. In part, this is achieved through working in co-operation with other parts of Scotland. Having secured its position in the global learning industry, and having done so by bringing others in Scotland together, Glasgow now enjoys a degree of political influence throughout the UK and Europe that is unprecedented in its recent history.

2. Fortress Scotland

Glasgow offers a good quality of life for those who wish to retire, study or work in certain – but not many – sectors. The public sector is the major employer and, consequently, the economy is more centrally planned than market driven. It is also one of the biggest purchasers of goods and services,

with many contracts are awarded locally. Innovation and creativity are not highly valued qualities; reliability and good workmanship are.

While the city does enjoy a learning culture, education is seen more as a route to social inclusion and personal achievement than a tool for wealth creation. Participation levels are good, but Glasgow is in danger of educating its citizens for a job in the early 20th century rather than the early 21st. Concerns about generating sustainable levels of wealth and employment

remain high, but the city fathers find it hard to agree on the best route to achieving them.

Entrepreneurial and energetic people tend to leave Glasgow; those who want challenge and major life opportunities are less likely to find them here than elsewhere. Consequently, there is less vocational education, less enterprise education and little use of cutting edge technology. On the other hand, caring skills, citizenship, administrative and communication skills are in high demand.

Mostly, education is provided by the public sector and although – like the whole of Glasgow's economy – it is vulnerable to outside predators, the system is fairly stable, if undynamic. Decades of striving to achieve social justice have paid off and Glasgow has finally made peace with the legacy of its industrial past. The challenge now is to step up a gear and train to compete in the new economy.

3. Glasgowville, CA

Glasgow's economy is buoyant, with small and medium sized enterprises dominating. There is a greater trend towards privatisation of public services, with education and health care leading the way and there are greater levels of employment for both high and low skilled workers. It is not all Utopia, however – the gap between haves and have nots continues to grow and society is increasingly polarised. The number of walled gardens – both literal and virtual – has increased and, although many people are in employment, not everyone enjoys the same opportunities.

Those companies, which thrive, place great emphasis on flexibility, R&D and innovation and encourage continual learning. Glasgow's educational institutions have themselves been transformed by adopting these characteristics and now deliver efficient, innovative and flexible learning in responding to market demand. One of the most important changes is the way that the institutions are managed. Teams of academic and business managers, working together to deliver sound curricular and business success run all universities, colleges and schools. This arrangement is not restricted to private sector learning providers – increased taxation has been ploughed into the public sector to ensure that education is a genuinely open route to success.

For those in work, life is fairly good but some cracks are beginning to show. There is an increase in serious crime and, consequently, in personal protection services. Individual stress levels have risen as people struggle to cope with the demands of work in the challenging global environment. Social and community relationships are under pressure. Increasing numbers of families break up, increasing numbers of individuals burn out and communities are in decline. The aspiration of many of the labour force may indeed be for greater personal empowerment and choice but, for many, it seems like a pipe dream.

The labour force sees learning as critical for success. Learners are highly demanding, seeking very focused solutions to their education and learning needs. Accreditation is not viewed as particularly important and institutions that are able to provide the skills needed by the market – personal development, enhanced confidence, self belief and entrepreneurialism – survive on their reputation. Flexible delivery, cheap and instant training, 'just-in- time' and 'just for me' learning are the keys to success. Glasgow thrives because there is an innate learning culture in its people; nevertheless, the transition from an industrial, manufacturing economy to a knowledge based learning culture has not been without problems.

4. I'm alright Jimmy

The Glasgow economy is based on low cost, low paid and unskilled labour. Goods and services produced locally are delivered predominantly to the Scottish marketplace and, although some specialised niche companies (in foodstuffs and tourism, for example) are trying to develop export markets, they are few and far between.

The city is a branch economy with major global brands locating here to exploit the cost advantages of the labour force. These employers are, of course, equally likely to leave should the costs become uncompetitive and Glasgow finds itself in a state of continual flux as investors – data processors, call centres, e-business warehouses, low grade assembly plants - come and go. There is little demand for education and little expectation that it will deliver good life skills or valued opportunities. While vocational training is somewhat more focused, most citizens have low aspirations which are easily fulfilled by the structure of the labour market – big employers may well go, but another one usually comes along sooner or later. The professional and managerial classes – inevitably dissatisfied with the provision – have made their own (private sector) arrangements for education. Successful individuals who leave school and go on to university tend to leave the city on graduation – if they even stay that long. Education in Glasgow has become elitist and good education has become a privilege.

While there are good local services and strong social networks, these, too, are elitist in their own way; it is difficult for outsiders to break in. In truth, not many want to. Although Glasgow has reduced its taxation burden on individuals and companies, the result has been a decrease in public services for all. For those who want a job and money in their pockets for Friday night, Glasgow delivers. Those with get up and go tend to get up and go.

Appendix 2

The RSA Competence Framework

The RSA Curriculum consists of five broad categories. Each of these contains a number of individual competencies, which are expressed in terms of what a school student could achieve having progressed through the curriculum.

Competencies for Learning

Students would:

- understand how to learn, taking account of their preferred learning styles, and understand the need to, and how to, manage their own learning throughout life
- have learned, systematically, to think
- have explored and reached an understanding of their own creative talents, and how to make best use of them
- have learned to enjoy and love learning for its own sake and as part of understanding themselves
- have achieved high standards in literacy, numeracy, and spatial understanding
- have achieved high standards of competence in handling information and communication technology and understanding the underlying processes.

Competencies for Citizenship

Students would:

- have developed an understanding of ethics and values, how personal behaviour should be informed by these, and how to contribute to society
- understand how society, government and business work, and the importance of active citizenship
- understand cultural and community diversity, in both national and global contexts, and why these should be respected and valued
- understand the social implications of technology
- have developed an understanding of how to manage aspects of their own lives, and the techniques they might use to do so including managing their financial affairs.

Competencies for Relating to People

Students would:

- understand how to relate to other people in varying contexts in which they might find themselves, including those where they manage, or are managed by, others; and how to get things done
- understand how to operate in teams, and their own capacities for filling different team roles

- understand how to develop other people, whether as peer or teacher
- have developed a range of techniques for communicating by different means, and understand how and when to use them
- have developed competence in managing personal and emotional relationships
- understand, and be able to use varying means of managing stress and conflict.

Competencies for Relating to People

- understand the importance of managing their own time, and have developed preferred techniques for doing so
- understand what is meant by managing change, and have developed a range of techniques for use in varying situations
- understand the importance both of celebrating success and managing disappointment, and ways of handling these
- understand what is meant by entrepreneurial and initiative-taking, and how to develop their capacities for these
- understand how to manage risk and uncertainty, the wide range of contexts in which these will be encountered, and techniques for managing them.

Competencies for Managing Information

Students would:

- have developed a range of techniques for accessing, evaluating and differentiating information and have learned how to analyse synthesise and apply it
- understand the importance of reflecting and applying critical judgement, and have learned how to do so.

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Scotland House Rond-Point Schuman 6 B-1040 Brussels T +32 (0)2 282 8315 F +32 (0)2 282 8300 Also at: Scottish Enterprise 5 Atlantic Quay 150 Broomielaw Glasgow G2 8LU T +44 (0) 141 248 2700 F +44 (0) 141 228 2114 W www.scotlandeuropa.com E information.desk@scotent.co.uk