

# **THE PROSPECTS AND POTENTIAL OF A NEW UNIVERSITY IN THE HIGHLANDS AND ISLANDS**

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## **INTRODUCTION**

This paper seeks to assess the proposal to create a new University of the Highlands and Islands (UHI). Advocates of the new university envisage it as a network of the existing further education colleges and research institutes in the region. It would be a federal university with a physical presence throughout the Highlands and Islands. However, it is also proposed that the colleges, and indeed students at home and at work, would be linked by state-of-the-art computer and telecommunications technologies. Thus, an electronic campus or 'virtual university' would be created.

While the structure and technologies proposed for the UHI have attracted a great deal of recent interest, the idea of a Highlands university itself is far from new (MacIver 1992). As far back as the 1830s, Inverness Town Council had proposed the creation of a university in the region. At that time, it was seen mainly in terms of the teaching of Gaelic, and this remains an important issue. The idea resurfaced nearly a century later, in the 1920s, when the focus shifted to a university's impact upon the economic development of the Highlands and Islands. Again, this is still a major part of

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the argument in the 1990s. Further attempts to establish a Highlands university were made in the 1960s when it was decided to create an eighth Scottish university but Stirling was preferred. Although focused on Inverness, this bid emphasised the potential contribution of a university to the support and propagation of the region's distinctive cultural and linguistic traditions.

In 1991, Highland Regional Council decided to re-examine the case for a university. The further education colleges in the Highlands (newly independent of local authority control), Highlands and Islands Enterprise, the Scottish CBI and the Scottish Council Development and Industry were invited to join the discussions and the UHI Advisory Steering Group was formed. The driving forces behind this latest move to create a university were Councillor Val MacIver, Chair of Highland Regional Council's Education Committee and the late Bob (Sir Robert) Cowan, Chair of Highlands and Islands Enterprise.

Over the next five years, the Advisory Steering Group commissioned a number of reports which helped flesh out how the UHI would operate. However, during this period, there was very little political support for the proposal. Indeed, the Scottish Office was known to be sceptical. This changed in February 1996 when, six months after becoming Secretary of State for Scotland, Michael Forsyth announced his backing for the idea to the Scottish Grand Committee meeting in Inverness. The Scottish Office has subsequently given the UHI network of colleges grants of £500,000 for video conferencing equipment and £200,000 to further strengthen links between the colleges. A further package of nearly £16 million was announced in late 1996, £9 million of which has apparently been siphoned off the budgets of the other Scottish further education colleges (Wojtas 1997). In addition to this financial aid, the UHI network of colleges has been exempted from the current cap on higher education student numbers in further education.

It is not clear why Forsyth gave such strong backing to the UHI proposal. He did appear to have been genuinely impressed by the degree of cooperation between the colleges, local authorities and other bodies involved and by the extent of their commitment to the proposal (with the idea of a UHI featuring prominently in all their strategic plans). By all accounts, Forsyth's visit to the Gaelic college, Sabhal Mor Ostaig, on Skye in October 1995 was also important in demonstrating the potential of new communications technologies to successfully link dispersed colleges into one network.

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The new Labour government seems equally convinced of the arguments for a UHI and has also backed the proposals.

In addition to the political support of Michael Forsyth, the other key development in advancing the prospects of a UHI was the award of £33 million by the Millennium Commission in September 1996 to help fund the capital costs of its establishment. Shortly after, a new chief executive of the UHI Project, Professor Brian Duffield, took up post on a four year contract, by the end of which he hopes full university status will have been secured. Already eight degree programmes - in business administration, applied computing, forestry and conservation, engineering, electronics and electrical engineering, rural development, environment and heritage studies, and human resources - are offered through Inverness, Moray, Thurso, Lews Castle and Perth Colleges, and on the UHI network. These degrees are currently validated by Stirling, Aberdeen and Robert Gordon Universities.

The remainder of this paper explains the nature of the proposed new university, assesses its likely economic and cultural impact, discusses the reasons for using computer and telecommunications technologies, and considers the impact of such technologies on students' learning.

### **THE PROPOSAL FOR A NEW UNIVERSITY IN THE HIGHLANDS**

A report written by Graham Hills, former Vice Chancellor of Strathclyde University, summarises the case for a new and different type of university in the Scottish Highlands and Islands (Hills 1992). The size of the region and the opportunities created by the introduction of the ISDN (Integrated Systems Data Network) information highway led to the view that the proposed new university should embrace the most modern educational structures and technologies:

The model of the university will be that of a hub and spokes. The hub will be the administrative centre responsible for the conduct of the university as a corporate entity ... The hub would speak for the university itself. It is nevertheless intended that it be small and determined to use its resources largely to further the aims and objectives of the separate colleges.  
(Hills 1992, p.5)

It is proposed that the hub will link existing further education colleges or research institutes using a computer and telecommunications network to create an electronic campus. The UHI will therefore be a federal, collegiate

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university. The colleges and institutes currently involved are Inverness College, Sabhal Mor Ostaig (Skye), Moray College (Elgin), Argyll College (Oban, a new college but one linked to the existing Dunstaffnage Marine Laboratory), the Ardtoe fish research centre (Lochaber), Perth College, Thurso College, Orkney College, Shetland College, the North Atlantic Fisheries College (also Shetland), and Lews Castle College (Stornoway).

At least initially, the staff of the new university will largely be drawn from those of the existing colleges. However, with expansion and the acquisition of university status, new staff will be recruited. Some will be full-time, especially at the larger centres at Inverness, Thurso and Elgin, but many will be part-time or visiting staff.

In terms of educational philosophy, it is intended that the UHI will be student centred. Thus, it will be

heavily committed to open and distance learning techniques whilst maintaining the closest interest in the individual student by effective tutorial and mentoring procedures. This will be its most distinctive feature, setting it apart from many other universities and therefore not inviting competition from them.

(Hills 1992, p.9)

Whether the latter point is true is questionable, however, as will be discussed later.

A further report, by Richard Hooper, has scrutinised the information technology envisaged by the UHI in more detail (Hooper 1993):

Every member of staff and every student, whether part-time or full-time, will be required to own, or have ready access to, a personal computer with communications and printing capabilities. Each personal computer will be linked via college local area networks and the telephone network to a university wide electronic mail and computer conferencing/bulletin board system.

(Hooper 1993, p.i)

The university network in turn will be linked to all other universities on the national and international networks. It is proposed that the UHI should therefore be able to accommodate students working either inside or outside the college campuses, from home or even from places of work.

Hooper recommends that the live teacher should not be used to any significant extent for the transmission of knowledge and skills: that is, the

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traditional lecture function. It is envisaged that this transmission role can be done mostly via self instruction with a range of media, particularly print but also audio and video tapes. Other media, such as the Internet, CD-ROMs, and multimedia, will be incorporated as and when they become tried, tested and standardised.

The crucial role of the live teacher is in pursuit of what Hooper terms the understanding function, helping students understand, apply and reinforce the knowledge previously transmitted. The live teacher in one location can be extended through space by the use of audio conferencing and computer conferencing. 'Audio conferencing is recommended rather than video conferencing because of the much higher costs of video. ... As video conferencing declines in price so it can take over from audio conferencing' (Hooper 1993, pp.13-14).

In addition, the use of electronic mail will play a number of roles. Students and tutors may use E-mail to communicate. Students may use it to submit written work and to discuss problems with other students. E-mail may also be used socially by students to communicate with, and get to know, each other. Public broadcasting (TV and radio) will not be used for teaching 'but as a university newspaper of the air and the university's shop window' (Hooper 1993, p.i).

### **THE ECONOMIC AND CULTURAL IMPACT OF THE UHI**

The grant of £33 million by the Millenium Commission will meet a significant proportion of the capital costs of establishing the new university, estimated to total nearly £90 million. Just under £8 million of the award will be used to fund the Project's central costs, for the purchase of information technology equipment and to finance the Project management and development. The remainder has been allocated to the constituent colleges, the largest recipients being Inverness College (just under £6 million), Perth College (just over £4 million), Lews Castle College, Stornoway (£4 million) and Orkney College (just over £3 million). A whole variety of developments are planned at the individual colleges but the Millenium Commission funds will typically go towards new buildings and building extensions and conversions, together with the equipment of new video conferencing suites, library and learning resource centres, and multi media facilities.

However, there are question marks about the sources of the remaining capital funding. European Union assistance has been mentioned. Since the Highlands and Islands was designated an Objective 1 region within the EU's

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regional and social policy, £240 million of EU Structural Funds has been allocated to the region. The UHI Project is currently seeking a grant of £10 million but, since EU funds would have to be matched by government funds, this would require much stronger government backing for the principle of a UHI than has been forthcoming as yet. There are hopes that the local authorities and development agencies in the region will contribute but, since the budgets of all these bodies are tightly constrained, it is inconceivable that they could free millions of pounds unless, again, central government assistance was forthcoming. Finally, the private sector might help but there are no obvious sources of large donations.

Equally problematic, the means by which the recurrent funding of the proposed new university is to be met are far from clear, an issue which has led to some opposition within the existing Scottish higher education sector to the creation of a UHI. In addition, there are concerns about the small numbers of students on higher education advanced or degree courses in the further education colleges which will constitute the UHI. There are currently some 2700 full time equivalent students at the UHI network of colleges taking higher education courses. However, one of the criteria employed by the Scottish Office in the past in granting university status has been a target of at least 4000 full time equivalent students. (Failure to fulfil this criterion delayed the transition to university status of what is now the University of Abertay in Dundee.)

If the funding of UHI students is to be met from the existing budget of the Scottish Higher Education Funding Council, then building up the UHI will be at the expense of existing Scottish universities. Thus, despite the hopes of Graham Hills, the UHI would be in competition with other universities from the very beginning. The alternative would be for the Scottish Office, or the Scottish Parliament once it takes over responsibility for higher education when the decision has to be made, to commit additional public expenditure to finance student numbers at the UHI but, yet again, this would require greater political support for the whole idea than exists at present.

Advocates of the UHI place great stress on the large economic benefits that it would bring. The obvious and direct benefits would derive from the spending of students, the wages and salaries of staff, and the purchasing of equipment and supplies by the university itself. An attempt has been made to compute these impacts (ERM Economics 1996; Black 1996).

Assuming an additional 2500 full-time students and 1270 more part-time students, and using average student expenditure figures from other

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universities, it is estimated that, over and above the existing spending effects of students currently at the area's colleges, there would be an increase in expenditure of approximately £8.2 million per year (at 1996 prices). The recruitment of new staff would also have a major economic impact. As well as directly employing teachers and administrators, the university would also provide work for secretarial, cleaning, security, maintenance and medical staff, and many others. Under the assumption of a fall in the ratio of students to staff from 10:1 to 8:1, this would imply an additional 470 academic staff and 120 support staff and additional expenditure of £24.4 million per year.

A university might also have a significant effect on the economy of the Highlands and Islands through its purchasing of goods and services. Projections based on present capital, purchasing and operating expenditures at Inverness College, Lews Castle College and Strathclyde University suggest additional expenditure in the region of some £16 million per year. Finally, the inclusion of additional expenditure of £0.4 million per year from conference activities and vacation lettings yields a total of £49 million additional direct expenditure which would be injected into the Highlands economy each year by the UHI.

In addition to this direct impact, the spending of students and staff would have a further indirect effect on expenditure. Student spending on rent, transport, books, clothes, food and drink, and entertainment will have a beneficial multiplier impact on many local businesses, including shops, bars and clubs, restaurants and cinemas. Since a large proportion of those working for the university would live locally, their spending on goods and services would also generate additional income and employment. It is estimated that this indirect boost to the economy would amount to £20 million per year, giving a grand total of £69 million per year.

This estimate of £69 million total additional spending per year injected into the Highlands economy by the UHI derives from some rather ambitious assumptions, particularly that the problems of capital and current funding identified earlier are solved and that the UHI colleges would enjoy a reduced ratio of students to staff at a time when this ratio is increasing almost everywhere else in the UK further and higher education system. Nevertheless, it does seem clear that the creation of a UHI would generate significant income and employment. However, what has perhaps been lost sight of is that any large project would involve an injection of spending power which would provide a significant stimulus to local income and employment.

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On the other hand, there are reasons why a larger multiplier might be expected of a university. A study of the economic impact of Lancaster University found a large multiplier effect, for two main reasons:

First, a high proportion of University expenditures are in the form of staff wages/earnings and student spending on accommodation, food, entertainment and other maintenance categories. ... Secondly, the Lancaster district comprises a surprisingly self contained local economy by British standards. The urban economy is a free standing one, with significant distances to other urban areas.  
(Armstrong 1993, p.1665)

The first of these factors would apply equally to a UHI, as already noted, and the second even more so. However, comparison with other establishments in the Lancaster area suggested that a large multiplier effect is not unique to the University. The Heysham 2 power station and a local manufacturing firm also had large impacts on the Lancaster economy.

In the longer term, the main economic influence of the UHI may lie not with its direct effects on local spending but, instead, with the university's impact on the creation, growth and innovation of local businesses and on the retention of young people in the region. On the first point, it has been claimed that 'the university will undoubtedly establish a reputation for research in specific fields, and some of these will have direct commercial applications' (MacTaggart 1994, p.3). There will undoubtedly be some success stories but it is perhaps over-optimistic to expect commercial spinoffs from the UHI which fundamentally alter the competitive or innovative record of Highland businesses. On the second point, while the population of the Highlands and Islands is growing (in contrast to the falling population of Scotland as a whole), people in their twenties and thirties are under-represented. A university might address this population imbalance if young people retained in, or attracted to, the Highlands by the UHI stay on after finishing their studies.

The UHI would also have social and cultural benefits to the Highlands and Islands. It could aid in the propagation of the culture of the region, as to some extent do the existing colleges already. For example, Sabhal Mor Ostaig, the college on Skye, teaches HNC and HND courses in business administration, information technology, and communications and rural development through the medium of the Gaelic language. It also offers a postgraduate Diploma in Gaelic broadcasting and short courses in Gaelic, piping and traditional Highland music (**UHI News** 1993). Similarly, a

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number of the degree programmes offered by other colleges in the UHI network, such as forestry and conservation, and environment and heritage studies draw upon the cultural and economic traditions of the Highlands and Islands.

In less tangible but possibly more important ways, a university might also act as a symbol and focus of pride and self belief for the people of the Highlands and Islands. The federal model of the UHI, with eleven campuses and a number of satellite learning centres spread throughout the region, should ensure that the physical presence of the university is very prominent. Moreover, it should touch the lives of many people because it would not just be targeting young, full-time students but also part-time students, women returners and other mature students, and people wishing to enhance their professional and vocational skills.

Possibly the most significant role a university could play in preserving and enlivening the culture of the Highlands and Islands would be in terms of its success in reversing the out migration of younger or more enterprising people from the region. Of course, many people will still choose to leave the Highlands to work or study but the very fact that they would have increased choice would be an important benefit in itself.

The mingling of local people and incomers to the Highlands attracted by the new university might have a number of valuable effects. There could be a significant stimulus to artistic, sporting and voluntary activities in many parts of the Highlands. Increased numbers of school age children might preserve the viability of local schools. The growth of population could lead to further improvements in transport and communications and encourage increased tourism. The creation of the university might be associated with the establishment of new cultural centres, more and new types of restaurants, and better and more varied shopping and entertainment facilities.

The impact of the UHI upon the culture and society of the Highlands and Islands may not, however, be wholly positive. Thus, there is some evidence that attempts to use universities to defend a cultural or linguistic heritage that is at risk generally meet with little success since 'almost invariably the systems of higher education exert rather a function of national homogenisation than one of local or regional differentiation' (OECD 1982, pp.30-31). Moreover, while incomers might enrich the economy and society of the Highlands, there is the risk that, as Bob Cowan put it, they will 'tend to weaken our own cultural heritage and differences' (Cowan 1992, p.16).

## **THE CHOICE OF NEW EDUCATIONAL TECHNOLOGIES**

It is proposed that the new University of the Highlands and Islands would use information technology to link a number of campuses and individual learners at home and at work. This is not a unique idea. Indeed, some existing universities and other proposed new universities employ aspects of this structure (Newlands and Lovie 1996). The government's planned 'University for Industry' will involve businesses being linked to the information superhighway. Suffolk University College, a college of the University of East Anglia, in partnership with British Telecom plans a 'televersity' which will link 15 local learning centres with advanced information technology. Plymouth University is proposing a regional network of 40 learning centres throughout Cornwall, Devon and Somerset equipped with computers, digital satellite reception and video conferencing facilities. A university in Swindon has been proposed in which students would work from home and communicate with their lecturers and tutors via the town's cable television network. At Ulster University, video conferencing equipment has been used for some years to unite groups of students at the different campuses of the University into a single class. In the closest single parallel to the UHI, Dale Campbell-Savours, Labour MP for Workington, has proposed the creation of a multi campus university in the Lake District with a number of Schools linked by an information technology system which Campbell-Savours terms 'the electronic library' (Campbell-Savours 1995).

The increasing use of information technology in higher education and the increasing popularity of the type of university model proposed for the UHI is due to a number of factors. A mixture of learning driven, technology driven and cost driven factors can be distinguished. Learning driven factors refer to the potential improvements to students' learning processes or outcomes which new educational media may make possible or to other educational advantages such as increased access to higher education. These issues are discussed further shortly. Technology driven change refers to the adoption of new technologies in higher education simply because they have appeared, usually having been originally developed in the business or entertainment worlds. The adoption of the particular structure of the UHI which has been proposed has been at least partly technology driven. Thus, 'the imminence of the new BT ISDN system was seen as a great opportunity to enhance the distance learning modes of teaching and academic study' (Hills 1992, p.3).

Cost driven factors refer to the interest in new information technologies as a means of reducing the costs of higher education provision. Most evidence suggests that in general new technologies are cheaper than conventional face-

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to-face teaching (Henry 1994; Newlands, McLean and Lovie 1996). However, the cost advantage of information technologies can quickly disappear if the costs of developing new materials is high or the number of students involved is small. Moreover, most analyses of costs have implicitly assumed that the benefits of different educational media are broadly similar but this is not necessarily a valid assumption.

Many of the newer educational technologies are expensive. Nevertheless, in a distance learning context, they may have cost advantages over the hiring of local tutors or the travel of a tutor round a number of study centres. This has been an important consideration at Ulster University where video conferencing has been perceived to be cost effective in that it saved on tutors' travel time and expense, especially given the distance between the different campuses of the university (Dallat, Fraser, Livingston and Robinson 1992). A further cost advantage of new media is that, by enabling the attainment of larger class sizes, they bring down average costs by exploiting economies of scale. Again, Ulster University provides a practical example of this. The use of video conferencing has allowed courses to run despite a thin geographical spread of students. Thus, while the number of students at each campus of the university might be small, video conferencing has allowed a viable total size of class to be put together. Both these cost advantages would apply to the model advocated for the new UHI.

The reason for the near obsession with costs in UK higher education is of course the intense economic pressure on the traditional university system, both in institutional and student terms. There has been a movement from an elite towards a mass higher education system over the last ten years in the UK. However, continuing Conservative policy, the government is not prepared to let the public expenditure costs of higher education rise in line with increasing student numbers. Instead, it is seeking to pass some of the burden of higher education finance to industry, universities themselves, and students and their families.

British industry has increased its financial support of higher education through commissioned research and various endowments but industrial involvement remains very small. Universities themselves have borne some of the burden of public expenditure restrictions. Funds for teaching and research have been reduced by enforced 'efficiency savings'. Capital allocations have been slashed and universities are now expected to fund new building projects through the Private Finance Initiative. A period of rapid expansion of British universities was brought to an abrupt end by the sudden introduction of a period of 'consolidation' motivated almost entirely by the desire to restrict

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demands upon the public purse. As for students, maintenance grants are being abolished, to be replaced by a system of loans, repayable over 20 years. All but the least well-off students are to be required to pay £1000 a year in tuition fees.

Among the many effects of these various changes will be to encourage more home based study. Currently, this tends to mean students staying at home and studying at their local university campus (**Times Higher Education Supplement** 1993). Increasingly, however, it may mean more part-time study along Open University lines - but not necessarily with the OU itself, rather with any one or more of the many British universities which may come to offer undergraduate degree programmes by distance study. Even when students still study full-time on campus, ever rising student-staff ratios are already encouraging more use of new educational technologies, particularly computer based learning. Another likely development is that the government will seek to increase the number of higher education courses taught by further education colleges since the latter are perceived to be cheaper providers than universities. This policy was endorsed by the recent committee of inquiry into UK higher education chaired by Sir Ron Dearing (National Committee of Enquiry into Higher Education 1997).

Needless to say, every one of these developments - more students staying at home, more part-time study from home, the greater use of information technologies on campus, and expansion of the further education sector - favours the proposed model for a new University of the Highlands and Islands.

While there are legitimate reasons why the choice of educational media should be influenced both by the pattern of technological development and the costs of new technologies, what is worrying is that, in general, technology and cost driven factors seem to predominate over learning driven factors. A recent survey of the use of new educational technologies found many traditional universities rapidly building up their portfolio of distance courses (Newlands and Lovie 1996). Universities' motives in increasing their involvement in distance education vary but there are some common threads. Increasing access to higher education, professional development and meeting the training needs of industry are frequently cited. Of course, these aims can also be restated from the point of view of the universities as the opening up of new markets and increasing institutional income and, indeed, some responses did express their reasons for involvement in these terms. The wish to exploit new educational technologies and their (often presumed) cost

effectiveness were both mentioned fairly frequently. In contrast, very few responses alluded to beneficial effects upon students' learning as a motive.

### **THE IMPACT OF NEW EDUCATIONAL TECHNOLOGIES ON STUDENTS' LEARNING**

Probably the greatest advantage of new educational technologies is that they can be used to promote access to higher education, making available educational opportunities which would not otherwise be available, especially for those living in remote areas or for people who work full-time but wish to study for a degree or improve their vocational skills in their spare time. New technologies may also promote open learning or a learner centred approach, characterised by flexibility of the location, pace and length of study. Furthermore, new media may encourage greater autonomy, independence and resourcefulness in the student.

However, against these advantages should be set various potential problems. For example, if there is little or no face-to-face contact, this will typically create a number of difficulties for the learner such as the absence of non-language communication, of feedback from tutor to student, and vice versa, and of student to student communication (Keegan 1990). The limited interpersonal communication involved in many traditional distance learning programmes has also tended to result in students feeling isolated and being more likely to drop out of courses (Sweet 1986). The question is to what extent use of new interactive media, such as video, audio and computer conferencing, which retain or restore elements of natural human communication, can maximise the learning benefits of educational technology while mitigating problems of isolation and exclusion.

It is proposed that the UHI would employ the whole range of new information technologies, including audio and video conferencing, the Internet, electronic mail and computer conferencing. Awareness of how these technologies have been used elsewhere is helpful in assessing how well the learning model suggested for the UHI would work.

At Birkbeck College, there has been an attempt to systematically evaluate the use of computer conferencing. One important conclusion was that there were no significant differences in essay and exam marks and in measures of satisfaction between face-to-face and computer conferencing students. However, the study also stressed 'the crucial nature of adequate preparation,

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induction and documentation, and also technical and academic support of students' (Hartley, Dickinson, Noakes and Tagg 1994, p.5).

The findings of a study of the experience of distance learning students using audio conferencing at Aberdeen University are also generally positive (Newlands and McLean 1996). The students found audio conferencing somewhat strange at first but adapted to it quickly. Nevertheless, any technical hitches were clearly resented. Audio conferencing makes it difficult to achieve a sense of group cohesion but this perhaps matters less than it might since, somewhat surprisingly, the study found that the students placed little value upon each other as an aid to learning.

Ulster University has been a pioneer of the use of video conferencing. Its experience has been that the assessment marks of students taught via video conferencing are comparable to those taught in the conventional manner and that there are significant cost savings. There have been some technical problems but, in general, video conferencing permits a relatively natural mode of communication. Thus, video conferencing represents 'a valuable, but not perfect, resource for inter-campus communication and course delivery' (Dallat, Fraser, Livingston and Robinson 1992, p.104).

More and more universities are now experimenting with these technologies, often in collaboration with each other. For example, in 1994, the Scottish Higher Education Funding Council established a Metropolitan Area Networks (MANs) Initiative which has led to the creation of four MANs covering the Edinburgh, Glasgow, Aberdeen and Dundee-St Andrews areas and involving all the higher education institutions in Scotland (Learning Technology Dissemination Initiative 1996). The constituent universities of each of the four MANs are now exploring the use of such technologies as video conferencing, on-line delivery of multimedia courseware, and electronic libraries.

Of the principal technologies, computer conferencing appears to be winning out at the expense of audio and video conferencing and this trend is likely to continue. This is partly because personal computers are now so common and are relatively familiar to users. A further major advantage of computer conferencing is that it can be asynchronous, that it does not have to take place in real time. Computer conferencing maximises the possibilities of open learning and is also relatively cheap although it is obviously more expensive in terms of staff time to maintain a dialogue with a given number of students individually rather than in a group. However, where computer

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conferencing is most inadequate is in terms of the limited interactive social quality of the medium.

Audio and video conferencing have to operate in real time. This, together with the cost of the technology, means that classes have to be a certain minimum size to be viable. The virtue of these two means of communication is that they are likely to provide more effective support to students. The choice between audio and video conferencing is largely one of cheaper cost versus a better quality of support function. Audio conferencing is cheaper but it can be a difficult medium to use (Robinson and Jones 1986; Newlands and McLean 1996). Video conferencing eases the problems of both tutors and students, restoring as it does the support given to the teaching and learning process by body language and eye contact. However, video conferencing may not solve all problems, especially if imperfect eye contact or a small size of human image still make it difficult to detect expressions and visual cues. The study conducted at Ulster University concluded quite emphatically that 'the advantages in using video conferencing for teaching and learning are pragmatic rather than pedagogical' (Dallat, Fraser, Livingston and Robinson 1992, p.40).

These experiences elsewhere are encouraging for the learning model envisaged for the UHI. Indeed, new universities explicitly premised on the use of new information technologies can be expected to encounter fewer of the problems which have arisen from the marrying of distance learning with conventional university structures. Thus, the University of the Highlands and Islands would be operating within a culture in which distance teaching and learning was the norm and this ought to be reflected in the expertise of lecturers, tutors and students.

The involvement of live lecturers in the transmission of knowledge may nevertheless be more important than advocates of the proposed new university suggest. While the experience of the Open University and of similar institutions in other countries has demonstrated that the involvement of live lecturers is not necessary, this does not mean that it is not useful. This is especially true in terms of maintaining the motivation and commitment of students which can be a particular problem in distance and open learning when students are often on their own for long periods. Thus, in contrast to the view that 'by means of permanent computer conferencing the colleges will be able to stimulate much of the academic ethos and ambience of conventional higher education' (Hills 1992, p.9), it could be argued that the involvement of lecturers in the transmission of information is fundamental to the ethos and ambience of a university.

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Given this, the limited experience of higher education among the staff of the further education colleges which will constitute the UHI is perhaps a concern. Despite the recent formation of a link with the OU Validation Service which will help the UHI build up staff development programmes (**UHI News** 1997), it is not clear what mechanisms to ensure quality teaching and learning there will be at the new university. Some doubts must persist therefore as to the overall learning experience of the UHI students by comparison with students in a traditional, face-to-face context.

A further problem is that the technology used at the colleges may not be readily available in students' homes or workplaces or, if present, it may not be of an adequate standard. The consequence is that, while the UHI may well succeed in extending educational opportunities in the Highlands and Islands, in practice it might become primarily campus based and thus look rather less different from conventional universities.

### **CONCLUSIONS**

With the receipt of the large grant from the Millenium Commission, it now looks as if there is such momentum that a University of the Highlands and Islands will be created, despite a number of reservations. The sources of the remaining capital funding and of the recurrent funding of the proposed new university are far from clear. The UHI would bring economic and cultural benefits to the Highlands and Islands but perhaps not to a significantly greater extent than any other large incoming investment in the region. The learning model proposed for the new university is one which could work although some doubts remain about the quality of the education which UHI students will receive.

It has, however, been suggested that there is a basic logical flaw in the UHI proposal. 'Given technological advances, and the fact that mainstream institutions now routinely offer distance learning options, what is the point of the new university? Why should higher education in the Highlands and Islands not be offered through existing universities?' (**Times Higher Education Supplement** 1996).

The answers to these questions may be that a local presence is important and that established universities have had their chance to extend higher education opportunities to people in the Highlands and Islands and have been found wanting. Perhaps, as much as anything, the advocates of a UHI have had luck on their side. The Millenium Commission has

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had a hard time finding people and plans which carry an appropriate sense of occasion, importance and vision. But the UHI project seems to have everything going for it: an input into a region with its own distinctive culture, recently turned around and hopeful after long term neglect, a project which harnesses modern technology in an innovative way, and the symbolism which accompanies the creation of a university. (Fraser 1996)

However, it should be said that advocates of the UHI have taken risks and persevered with their vision of a new and different university in the Highlands and Islands while others have stood on the sidelines and foreseen only problems. The UHI and its backers have earned their luck.

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