HL.

New Technology in the Human Services

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Up Front

The Conference

For some the 1997/98 academic year ended with the IFSW/IASSW Joint World Congress in Jerusalem, 5-9 July. The conference was a truly global event with 60 countries represented and over 600 presentations. 16 of the papers (2.6%) dealt with the use of ICT in social work practice and education as their topic. This represents a substantial increase on the last IFSW/IASSW Congress in Hong Kong in 1996 which had 3 papers on this theme amongst its 450 presentations (under 1%). On first examination 2.6% is still not significant in terms of centrality or indeed advocacy of the subject area. A brief piece of research on NISW's Caredata CD-ROM discovered that in 1996 NISW abstracted 4074 books, journal papers and articles and searching on the keywords 'information technology' and 'computers' provided 89 abstracts, that is 2.2% of the literature covered by NISW. So in fact the 2.6% of ICT related papers at the conference shows a slight increase over the literature norm. Yet the queues outside of the only email facility provided by the Israeli Association of Social Workers showed that the communicative aspects of ICT at least are gaining in popularity. Or was it that those of us who are used to email are now unable to cut our umbilical communication cords even for a few days?

The Web

Volume 11 No. 1 of this journal reported on a mini-survey we undertook on whether NTHS should stay paper-based, go on-line, or both. As we reported the result was that the journal should aim to be both paper based and on-line. We are pleased to announce that NTHS will be going on-line with full text papers in the near future in partnership with the National Institute of Social Work. The agreement we have reached with NISW's Director of Information, Mark Watson, is that they will mount past NTHS issues on their new NT web server and these will link to their forthcoming web-based Caredata service. Subscribers to NTHS will continue to receive the paper version but will also receive a password to enable them to access the on-line versions of past issues. Caredata subscribers will also have the opportunity of accessing NTHS on-line but will not receive the latest issue. This agreement expands the potential readership of NTHS without placing the extra burden of building and maintaining an NTHS full text web site on the over-stretched editors and maintains the paper version for those without web access. As soon as the service is ready we will write to all subscribers inviting you to take advantage of the new media.

The Journal

The first paper in this issue takes an over-arching approach to the role of the 'information society' in relation to its impact on social policy and the 'social quality' of life in Europe. Steyaert and Gould's paper *The social aspects of the information society: transmogrifying issues and approaches to social policy* argues that the information society remains a contested concept and that the information society brings both threats and opportunities with regard to social quality. This paper goes beyond the usual scope of the journal but provides an important contextual foundation within which to place the more specific topics addressed in NTHS papers. The paper was first presented at a conference on *The social quality of Europe* organised in Amsterdam in 1997 by the Dutch Ministry on Health, Welfare and Sports and we are pleased to formally publish it.

The second paper by Rafferty; *Social work and information and communication technologies: the tortoise and the hare?* is offered as a 'think' piece and sets out to examine some of the strands of change taking place in the separate but increasingly overlapping universes of social work, information and communication technologies (ICT) and education and training. This paper was presented at an expert seminar in Budapest in January 1998 as part of the planning of the Husita 5 themes.

Friedman, Ward and Biagianti take the macro theme of the impact of ICT on social work education and examine it through the micro process of using Bloom's Taxonomy of Educational Objectives (1956).

The skill of information literacy is a key theme within this issue and introduces the notion of informacy as a term that will increasingly sit alongside numeracy and literacy'.

The first review fits well with the information society theme running through this issue. The journal finishes with four reviews and takes on the first of the three volume opus of Manuel Castells. Two of the reviews have ICT as a support for older and disabled people as a central theme; both emanating from work within the EU. The fourth review of a North American manual from AHEAD ICT has a more marginal to the broader subject of supporting disabled students.

Finally, remember there is only a relatively short time left to submit your abstract for 'Social Services in the Information Society: Closing the Gap', the Husita 5 conference in Budapest 29th August – 1st September. The deadline for calls for presentations is 31st October 1998. See the enclosed leaflet.

The social aspects of the information society: transmogrifying issues and approaches to social policy

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Abstract

This paper was first presented as a background paper to the invitation conference *The social quality of Europe*, organised in Amsterdam, 8-10 June 1997 by the Dutch Ministry on Health, Welfare and Sports. An extended version of this paper including links to relevant 'cyberdocuments' is available at http://www.fontys.nl/causa/amsterdam/

Introduction

Words are a wonderful object for scientific research. They have a dynamic history from when they are conceived (by intention or pure luck) until they disappear in the memories of older people or archives. As such they offer us a mirror of society and reflect social reality. The words 'information society', unheard of twenty years ago, are certainly going through a growth phase these days. One can hardly open a newspaper or listen to the news without having them mentioned.

Does the existence of the words 'information society' imply that there is such a thing as an information society? Or that we are living in one? Or that we are developing towards one? And if so, what is the precise meaning of 'an information society'? What do the words stand for? When, and if, we become an information society, what will be the social aspects of such a situation and what effect will it have on the social quality of our lives?

Within the context of the millennium and a feeling of entering a new era, this paper asks whether the information society indeed presents a quantum leap from the past, or is merely a rhetorical representation of a long-standing process of social change. Moreover, this paper aims to introduce a discussion on the social aspects of the information society, and inform constructive dialogue on what has to be taken into account when planning the Europe of the future and its social quality.

As such, this background paper includes the following sections:

- The information society, concept or chimera?
- ICT developments underlying the information society
- ICT application domains shaping the future
- New social issues
- New approaches to social policy
- Revisiting the 'information society'

The information society, concept or chimera?

From industrialism to post-industrialism
The conception of the label 'information society' can be traced back to social research in the late sixties and early seventies, more precisely to Alain Touraine and his American counterpart Daniel Bell (Bell 1973, Touraine 1969). Both analysed the social and economic changes in the society at the time and used the label 'post-industrialism' to indicate that a new era was entering our lives. In his analysis, Touraine was focusing very much on the shifts in power relations between social classes, and the emergence of a new social class of technocrats, which he believed would become dominant.

Bell analyses economic and industrial developments in Western (American) society as paving the way to the sequel of the pre-industrial and industrial society. Within the pre-industrial society, the main focus of economy was on harvesting the fruits of nature, mainly through mining, fishing and agriculture. In industrial society, this focus changed to the manufacture of commodities. In the coming post-industrial society, Bell predicts information in all its forms to be the core focus of economy: "in capitalist society the axial institution has been private property and in the post-industrial society it is the centrality of theoretical knowledge" (Bell 1973, p. 113). Both Touraine and Bell identified information as being a key-ingredient of the post industrialist society. As Negroponte phrased it, the central locus of economy was no longer to be found in transformation of atoms, but in processing bits (Negroponte 1995).

From post-industrialism to information society
The concept of 'information society' does not feature in the early work of Alain Touraine or Daniel Bell. Both referred to the societal changes as being post-industrialist. It would require some archaeology in the archives of scientific publications to determine who can take credit of launching the concept of 'information society'. A strong candidate is without any doubt Yoneji Masuda, one of the people who developed the Japanese policy 'the plan for an information society: Japan's national goal toward the year 2000' (Masuda 1983).

The concept of the information society and the futuristic scenario of the Japanese were eagerly taken up by Western visionaries such as Alvin Toffler, John Naisbitt and more recently Nicholas Negroponte or Michael Dertouzos (Dertousouz 1997, Naisbitt 1982, Negroponte 1995, Toffler 1981). All contributed to the popularisation of Touraine's and Bell's ideas and the dissemination of the concept of the information society and its synonyms such as the digital society, the wired society (lately transformed into the wireless society), the electronic cottage, the global village and the like.

No concrete and operational definition of the 'information society' is available, and it is consequently still impossible to determine which societies or countries have already achieved the status 'information society'. However, there seems to be a common understanding as to the ingredients of the concept of 'information society': The ingredients are threefold: more information, more technology and more third sector economy:
- Western societies have seen a significant *increase in information* over the past decades. Since Price charted the exponential growth of scientific information products (Price 1963), many other social domains have seen a similar development. We now have more books, more telephones, more television channels, more radio channels, more Internet connections, more…. than ever before.
- Western societies have also seen an even more significant *increase in information technology*. The present information and communication technology (ICT) differs qualitatively from the technology we had five or ten years ago. It is common to state that the current personal computer has more capacity than the computer of an average university computer centre a decade earlier. Additionally, current ICT is characterised by a wide dissemination across large proportions of Western population.
- Finally, Western societies have seen, basically since the end of the previous century, a shift in *economic focus from first to third sector*. Both in terms of absolute and relative labour force as well as in terms of contributions to nations' GNPs, the third sector sits on the forefront. Hence, the occupational structure of our society has changed considerably (Esping-Andersen 1993, Gershuny & Miles 1983). While the generation of our grandparents predominantly consisted of farmers and industrial workers, the current labour force consists to a large extent of white-collar workers. This reflects the increased importance of information-intensive economic sectors such as media, banking/insurances/social security, government administration and education.

Not withstanding these illustrating statistics, assessing to what extent a society is an information society, using operational/measurable indicators is still not manageable, nor is stating when exactly a society passes some thresholds and can be rightly called an information society (Miles 1990, Williams 1988).

Information society, a concept scrutinised
The concept of the information society has many worshippers, those who applaud the thrilling effects of the new developments and those who launch warnings about its negative effects. Both groups actually share the belief that our society is indeed (moving towards) an information society. Some however scrutinise the very notion of there being or coming something that can be labelled information society and entitle it a 'hype', joining the other 'hypes' so frequently found in informatics or management literature. This group has serious questions regarding the (absence of) methodology underlying some of the research that forecast the information society and dispute the qualitative shift from industrial to information society.

Methodology
Relatively little quantitative research is available regarding the information society. The common approaches in the research to validating the shift towards the third sector are measuring the number of organisations in economic sectors or their contribution to national GNPs, an important ingredient of the information society. This is most often done by relying on official statistics. However, apart from questioning their reliability and the fuzziness of conceptual boundaries (Miles 1990, p. 17-21, Miles 1991), one can ask whether data on the level of organisations offer a detailed enough platform for analysis. A newspaper company will be allocated to the third sector because it deals with information processing and includes white-collar workers such as journalists. Describing a newspaper company as third sector however disguises the nature of the manual labour of printers, delivery people and similar activities within these organisations. Assuming one

can rightly categorise an organisation as third sector, would that be equivalent to the information society? Would Disneyland Paris be third sector? Beyond doubt. Would it be the information society?

Taking this argument further, one also needs to question whether an analysis on the level of jobs rather than organisations would solve the issue, as also each job is a curious mixture of 'informational' and 'non-informational' tasks.

Quantum leap?
As the ingredients of the 'information society' are not well defined and therefore not measurable, there is ample room for interpretation in an overview of the developments that are currently taking place. As such, the dominant interpretation declares we have or are about to enter the information society. Such an interpretation is backed up by policy developments, with international organisations such as G7 or the European Union as well as many individual countries shuffling considerable policy activity on a myriad of societal domains under the label 'information society'.

Contradicting this perspective (which Miles labels the 'transformist perspective') is the interpretation that information technology is merely the current stage in a long-term process which will not change any of the main features of society (Miles et al. 1988). "There is no novel, 'post-industrial' society: the growth of service occupations and associated developments highlight the continuities of the present with the past" (Webster 1995, p. 50).

ICT developments underlying the information society

Beyond much doubt, the significant progress of information and communication technology, both in quantity as in quality, has contributed much to the popularity of the concept of the 'information society'. Far more than its other aspects, it is the technology that is the most tangible, visible characteristic.

These information technologies come in many forms from the chip in our washing machine or microwave to the small computer that controls the smooth running of our car. Most noticeably, it is represented in the form of the personal computer. Innovations include increased computer power for less money, but also new products/services such as CD-ROMs, multimedia and GSM telephones. The increased power of personal and other computers and their wide dissemination have increased the information processing capacity of (Western) society.

Computers not only become more powerful and cheaper, but they also have lost their individuality. Only five years ago it was rare to find a computer that was connected to anything but a printer, unless you worked in a university or the defence industry. This picture has changed drastically, as many computers now have modems and are connected to the Internet, CompuServe or other major networks. The telecommunication aspect of technology has gained importance. Technological progress in this area is just around the corner, with ISDN lines becoming more accessible in price and other high-speed telecommunication media being developed and installed, e.g. ATM and symmetric broadband. High expectations lie in developments in the area of the interactivity of the existing television cable network. Once this network becomes interactive, it allows households not only to receive information

(television programmes) but also to send information back enabling value added network services to be provided, such as telephone services, internet or video-on-demand.

A recent study on behalf of the UK Department of Trade and Industry identified four strands along which the technological dimension of the information society seems to be developing. A distinction was made between the 'IT path' (number of PC's per inhabitants), the 'mobile path' (uptake of cellular telephony), the 'content path' (number of internet hosts) and the 'television path' (cable coverage). On each of these strands, only statistics pointing upwards can be shown. Moreover, all of them are converging, creating a platform for synergy in developments.

The advances of information technology and the equally fast moving developments of communication technology could result in society's housing infrastructure not only being served by a network of water, gas and electricity supply, but also by a similar network of information supply. "The 'information grid' is seen as analogous to the electrical supply. As the electricity grid links every home, office, factory and shop to provide energy, so the information grid offers information wherever it is needed. This is, of course, an evolutionary process, but with the spread of ISDN we have the foundation elements of an 'information society'" (Webster 1995, p. 7). Although there are many stakeholders in these developments (users, information providers,…), there are considerably less stockholders involved (basically only those providing the infrastructure, that is telephone companies and service providers).

ICT application domains shaping the future

The development of technical applications finds utilisation in a range of domains to which the concept of social quality is relevant. This section gives an overview of some of those domains that are most significant in the daily lives of European citizens: political participation; the home; health and education.

Political participation: Teledemocracy
ICT will extend the reach of conventional representative politics but also has the potential to support new forms of political participation, at local and state levels, through various forms of electronic participation. Conventional forms of political activism supported by ICT include outreach work (newsletters, broadcasting, videos), networking (e-mail, bulletin boards, access to databases), internal organisation (collection of membership lists, finance), decision-making (expertise, technical information, aids to co-operative working). At the same time administrative and political information can be made readily accessible to individuals and groups; the World Wide Web is also a forum at the service of local and national governments. Users of government services can be empowered, examples being welfare advocacy using expert systems to give advice, prepare legal documents and ascertain benefit entitlements. We have yet to see, but the technical possibilities exist, for extension of political participation, sampling public opinion, conducting referenda, particularly at the local level (Percy-Smith 1995).

These are all generally seen as benign or productive effects of the Information Society - but there also concerns. The political environment could become more volatile in various ways. Pressure groups are able to mobilise more

rapidly through electronic networks. This level of reactivity can already be seen in the organisation of some neo-fascist groups who are using the Internet as a medium for organisation (Eatwell 1996). ICT also increases the pressure and volume of information, which potentially diverts the focus from key issues (Experts 1996). Not least, the maintenance and extension of pluralism is not supported by dependence on technologies which disenfranchise people who are non-ICT users, exacerbated by the potential deterioration of traditional non-electronic media.

Whether ICT capacities will be utilised to widen democratic processes, sometimes referred to as the creation of 'teledemocracy' is likely to be further influenced by anxieties about the increased level of volatility which may result. Etzioni expresses concerns that extensions to decision-making such as through electronic referenda need to be matched by opportunity for consideration and reflection (Etzioni, 1992). Abramson similarly warns against a form of politics, which is the instant registration of preferences unmediated by discussion of the common good (Abramson et al, 1988).

Home informatics
Home informatics - the application of ICT products for use within the private household - has tended to be a 'poor relation' in intellectual terms to medical, industrial and defence spheres (Miles, 1988). However, in both economic and social terms this is an area worthy of attention. Home informatics is often a by product of more 'serious' industrial research and development which directly impacts on daily social quality. The level of informatisation of the home depends on demand levels for new technology - the reduction of price levels of existing services or products and the creation of new, affordable products (Miles et al, 1987). Whether the digital home contributes to the creation of a sometimes hypothesised 'leisure society' will also depend on the extent to which hours saved by technology are redistributed. The digital home is becoming a more integrated base for a range of activities including work, education, healthcare as well as traditional domestic activity. The home has become not just a site of consumption but also of informal production including information production (word processing, video and camrecording), storage and retrieval of information (CD-ROMS, audio and video tapes), communication of information (e.g., telephony and e-mail), messaging, relating and displaying information and acting on information.

Although the recent creation by leading hardware and software producers of 'Cyberhome 2000' (see *The Independent 26 April 1997)* still has connotations of gimmickry and ostentatious consumption, most European homes will contain varying levels and combinations of these technologies. With technological convergence these applications and systems will become more interactive creating the possibility of the 'smart home'. One of the most powerful developments for social quality can be the emergence for vulnerable people of smart systems combining alarms with integrated systems for the delivery of domiciliary-based care (Moran 1993). Whether assistive technologies will be provided for people in their own homes depends not only upon the technological innovation and budgetary capacity of welfare services; but also on the willingness of welfare bureaucracies to develop the flexibility necessary to agree standards and networking procedures, and to incorporate user perspectives in the development and implementation stages. Culture also remains a key determinant of the uptake of home informatics, teleshopping being an example

where societies with a tradition of mail-order shopping may adapt to on-line services such as the French Minitel, but fail in others, such as Prestel in the UK. Similarly, potential consumers remain cautious about 'future-proofing', that is commiting themselves to an application that does not establish a market position and becomes obsolete.

Health care
The delivery of healthcare has always been an information-intensive activity but ICT both increases the information capacities of health systems and also transforms the technologies of healthcare. This provides the potential to deliver better coverage of services, more effective diagnostics and intervention, and more cost-efficiency (Experts, 1996). Most sectors of the health delivery services are rapidly changing to electronic forms of patient care information. In the United Kingdom 90% of general practitioners own PC's, in Denmark 65%, the Netherlands 80% with implementation of electronic patient recording systems closely following hardware implementation (de Maesseneer & Beolchi 1995). Similarly, in most major hospitals there are distributed systems for the maintenance of clinical information.

The combination of ICT, especially with broadband and ISDN networks, creates the potential to move forward on various fronts. The possible exchange and combination of digitised information obtained from a range of diagnostic procedures extends the availability of expert clinicians to patients through remotely conducted examinations and the combination of medical expertise by on-line consultation between clinicians in separate locations. Health gains and cost-efficiency effects can thus be produced not only by the combination and transfer of information but by the reduction of need to move patients to centres of excellence, or for expert clinicians to visit patients' localities. Whether and at what pace these opportunities can be exploited depends upon a range of organisational and professional factors. These include the development of standards to make compatible the diversity of technologies incorporated with health informatics, and the reorganisation of systems to take best advantage of information processing and sharing. As with most ICT domains, human resource development will need to be continuous to keep pace with technical change. There will need to be vigilance to see that improvement and innovation are not restricted to high status, high technology areas of clinical practice. Not least there are ethical challenges relating to new scenarios such as ITC mediated patient-doctor consultation and intervention, not to mention more long-standing concerns about the protection of confidentiality of electronic care records (Experts 1996).

Education
For many people the concept of the Information Society is synonymous with that of the 'Learning Society'. The belief that adaptation to the pervasive effect of ICT requires both a lifelong commitment to education and retraining, but also the skills of 'informacy', alongside numeracy and literacy, so all social groups can take advantage of new technological opportunities. Informacy involves both an understanding of new technology both as a substantive subject area but also the use of multimedia, on-line services, electronic libraries etc as means to learning in other curriculum areas. ICT both increases the availability of information to learners but also enhances the opportunity for interaction with teachers and peers who are geographically distant.

The most developed sector in relation to the implementation of ICT assisted learning is the tertiary higher education level, where electronic mail via the Internet is a long-established medium for research collaboration and networking. More recently, the World Wide Web has also enabled extensive academic sharing of resources and data. Nearly all European universities are connected to the Internet and usage has spread beyond professional academics to students who are able to access electronic library services and use email. Many European states are now seeking to extend these capabilities to schools and further education institutions, often through initiatives combining private and public finance. An often-cited instance is the German 'Schulen ans Netz' scheme, which over three years will give access, by 20% of schools, to national and international networks, and multimedia services, and numerous other countries have similar or even more ambitious schemes.

Ironically, the widest access to learning technologies remains in the home, through ownership of PC's and telecommunications tools, with home-purchased educational multimedia a fast-rising percentage of the overall market (ISPO, 1996). Whether these technologies can be fully exploited as educational tools depends on the continuing evolution of an understanding of the pedagogic dynamics of distance learning and learning via electronic media. Many of the earlier naïve expectations of computer assisted learning are being moderated to acknowledge the influence of social interactions as reinforcers of learning (Gould & Wright 1995) if the ICT-based benefits of self-directed and autonomous learning are to be fully utilised.

New social issues

The coming of the information society not only needs to be analysed in terms of technical innovations, information technology applications or economic changes. There are also social aspects relating to the societal changes. Daniel Bell has already indicated the significance of the social aspects in his seminal work in 1973, making the distinction between the economic and sociological modes of post-industrialism (Bell 1973, chapter 4). In his forecasting, the information society would include companies moving along a continuum from the economic polar extreme to the sociological one. The main difference between both is the extent that commercial companies take social issues into account.

Bell's hopes and analysis have not resulted in reality. Currently technological advancement is looked upon with a mixture of gratitude for the scientific achievements and the societal progress it symbolises, but equally with a sense of uneasiness as to the social implications it might bring. A doom scenario of the information society predicts gloomy futures for our employment, cultural diversity, equality and privacy.

Employment
Employment and unemployment are likely to remain issues of strong concern in relation to new technologies because of their impact on social cohesion and political stability. The more optimistic view is that on balance ICT is creating more jobs than are lost, although conceding that the capacity to capitalise upon change will be largely dependent upon the wider social policy environment, such as education, labour mobility and social security. The United States are sometimes cited as a country that is under-capitalising upon its technological advantages because of skill shortages and absence of supportive

social. The counter-claim to the 'balance of job creation and loss' thesis is that ICT underpins jobless growth.

Whatever the merits of either the optimistic or pessimistic view, it has become a truism that through technology newly created jobs or modified ones will be different both in terms of the conditions of service which ensue, but also as a consequence of their content. With respect to the former, jobs are more likely to be fixed-term contracts, making demands upon families and individuals to manage the transitions required by 'flexibility' in the employment market. Secondly, the new jobs will require higher cognitive skills to accomplish them creating a need for individuals to maintain a lifelong commitment to training and education, and redundancy or uncertainty of employment for those who are unable to climb onto the new technology bandwagon.

ICT also reconfigures the spatial nature of work, with many people able to capitalise upon combinations of computer and telecommunication technology to work primarily from their place of residence. The initial view that teleworking was a form of Utopian liberation has more recently been tempered by the recognition that many people who work at home with ICT tools are traditional professionals - such as academics or consultants - exercising a choice to work at home occasionally (Qvortrup 1994). Secondly, for the genuine cottage teleworker there can be psychological stress factors associated with removal of the traditional routines and structure of attending the workplace, and the removal of the social relationships.

Cultural diversity endangered?
The globalisation of our lives through information and communication technology has had remarkable positive effects. The erosion of time and space has brought people across the globe closer together, if not in living conditions or political views, at least in communications. Television and newspapers provided us with information about distant places, the Internet allows us to communicate interactively with people living there.

Three different concerns are expressed regarding the globalisation aspect of the information society, all of them overlapping and interacting with each other. Firstly, there is concern that the globalisation of the economy, thanks to the efficient processing of information on a world wide scale, results in the consolidation and reienforcement of multinational conglomerates that have a substantial impact on our lives.

Secondly, given this globalisation and the strength of some multinationals, a reduction of cultural diversity could emerge in the form of societal standardisation. In the global village we live in, McDonald hamburger shops can be found everywhere, as are Hilton hotels or programmes such as Miami Vice. The local flavours of different cultures have a hard time surviving. The language imperialism of English (and variations thereof) on the Internet is another example.

Finally, applying the previous concerns to the news media, one can only wonder at the concentration of capital and power in a few media consortia controlling what we read in our newspapers and watch on the television news. "The bulk of international news – actually 90 per cent – published by the world's press comes from just four Western news agencies" (Webster 1995, p. 79). Herbert Schiller uses the term 'private ministry of information and culture' to refer to the small number of people controlling the overwhelming majority of our cultural activities (Schiller 1987). Recent developments

and the dissemination of the Internet might well prove to change this latest concern, by enabling minority groups a global audience at the cost of a local call.

Inequality

Employment and unemployment are intimately related to the distribution of resources and wider questions of inequality. The benefits of ICT also bring with them the dangers of reinforcement of social exclusion of social groups, localities and regions. For many people there remain problems of the affordability of appliances. National statistics show the variations of market penetration of personal computers, mobile phones, modems and other ICT tools. This is compounded by the affordability of access to on-line services, so even if people have the hardware in their homes, subscription fees and rentals are beyond the means of many. Additionally, familiarity with technology ('informacy') remains a barrier for many people to utilisation, let alone ownership of the paraphernalia of new technologies. These exclusions are patterned by the same variables that underpin other dimensions of inequality, such as income, ethnicity, disability and geographical isolation. Furthermore, a question rises whether inequality to information technology is simply a question of access to, and knowledge about, the technology (solved by provision of technology and training), or also a more complex cultural issue related to different ways of utilising the same technology. This would provide links between the issue of equality in the information society and the work of Basil Bernstein on equality towards language and his approaches to sociolinguistics and strategies for remediation.

The need to search for creative solutions to promote universality of electronic information services is likely to mean partnerships bringing together public and private initiatives. Examples of some of the conceivable outcomes from such partnerships have been identified within the first annual report to the European Commission from the Information Society Forum. One possibility would be to make interactive facilities provided through human services (health, education, social services, public information) available to all, irrespective of geography or personal economic resources, probably through local access points in public places. As the Forum identifies, the provision of universal access may involve a cultural shift to replicate the ethic of public service broadcasting in relation to some aspects of electronic information services. For some groups of people this includes the exercise of positive action to create equality of access, for instance in relation to assistive technologies which enable people with disabilities to use computer-based and on-line services.

Gender remains one of the principal axes of inequality although ICT has the capacity to change the balance between family and working life, which, of course, carries significant gender implications (Miles et al. 1988). The various changes within employment are occurring within a segregated labour market so that change has differential impact on men and women. These developments will have implications for education and training that challenge conventional assumptions about gender and career choices. This would include equal opportunities policies to challenge 'glass ceilings' in technology-related work, working patterns which are compatible with family responsibilities, and greater involvement of women at design and specification stages of hardware and software development (Commission 1996). Above all, there is a need for gender equality issues to be mainstream in employment policies to maximise gains both for reasons of social justice, but also for commercial maximisation of human resource potential.

Privacy

The emphasis on market exploitation and deregulation currently found in information society policy statements can result in inadequate attention to public anxieties about privacy and freedom from intrusion. There are at least two major areas of unease: unauthorised access to files by agencies, and the combining of data from diverse sources to give a composite profile (Webster 1995, p. 68). Social theorists have identified the ambiguity between positive connotations of the information society, and the possibility of reframing the same technologies as negative characteristics of a surveillance society.

As discussed above, positive effects of ICT include the wider plurality of opinion represented within political debate, enhanced access to public opinion, a greater scrutiny of government, citizens producing as well as consuming information, and enhanced privacy and anonymity of personal communications. An unexpected positive effect of widespread dissemination of technology is also that most Western countries now have well elaborated privacy regulations. But for all these gains there are also potential losses. Pluralism is constrained by access issues. Scrutiny of government is bound by willingness to provide access to official information. Production of information is dependent upon adequate resources. Anonymity also carries risks of lack of accountability for information, and privacy and security are compromised by continuing technical limitations of security, particularly over the Internet.

The issue of privacy inevitably overlaps with that of surveillance. Data entrepreneurs increasingly operate by combining data sources (for instance consumer purchasing patterns as tracked via store or credit cards) with other personal databases to produce new levels of intimacy in the profiling of families and individuals to create marketing opportunities. Lyon cites the example of the targeting of advertising and promotional material to customers whose family structure can be reconstructed from the purchase of items such as nappies. "...Questions of social division, both between consumers and non-consumers and along the fault lines of gender and ethnicity, provide critical analysis in terms of justice and social participation." (Lyon 1994, p. 157).

New approaches to social policy

The substantial changes in the societal context determining social quality not only give ground to new or reinforced social issues, but also provide openings to new approaches. These include several social developments that have a positive effect on the social quality of our lives as well as new organisational frameworks and a general increase of effectiveness/efficiency of social policy (Steyaert et al. 1996), the main instrument to address low social quality.

On the level of social issues, the information society has to be considered as a (potential) producer of improved social quality through citizens' increased empowerment and autonomy. This includes e.g. the way assistive technology enables people to more fully enjoy daily life and participate in society, hence reducing social exclusion. Social quality can be further nourished by education ensuring no single citizen misses their 'point of entry' onto the information highway, as is done in e.g. the Danish 'info-society for all' policy and other national developments.

The information society as producer of social quality also refers to citizens having increased access to on-line information platforms, both as consumers and providers of information. The latter is illustrated by numerous examples of minority groups having a strong voice on the internet or by the *SeniorWeb* world wide web project in the Netherlands, specifically aimed to introduce older people to the information highway and to reduce social isolation. The former is linked to developments in the area of teledemocracy and open government, as illustrated e.g. by European Union's green paper, which was the hub of a 'virtual' democracy platform.

The evolving information society not only offers opportunities to improve social quality on the level of social issues. It equally introduces new horizons for the organisational structure of the institutions that embody Western welfare states. The capacity to manage large 'rivers of information' through intensive use of ICT drastically changes the relationships between government and service providers. Overt central control gives way to closely monitored tasks seconded to quangos. The concepts of 'social indicators' and 'performance indicators' take on a whole new meaning as they become determinants in the distribution of devolved budgets (Bebbington & Davies 1980, Vaarama 1996).

Probably the most substantial and structured challenge to improve social service provision through organisational change and use of information technology relates to developments such as the Community Care Act in the UK. Most social service provision processes in Western countries are eagerly being redesigned to reflect neo-liberal approaches and be more market-oriented. Traditional organisations covering intake, assessment, care planning, care provision and evaluation now find themselves being disentangled into separate units buying or selling services in a mixed economy of welfare. New information needs emerge in the area of more formal client assessment and elaborate client information systems (Gould 1996, Lewis & Glennerster 1996, Steyaert 1997). Re-assembly of the ingredients of former welfare organisations results in one-stop services relying on intensive information traffic between front-offices and back-offices, as e.g. in the *loket 2000* initiative in the Netherlands.

On a more modest level, the information society offers increases in efficiency and effectiveness of social service provision. This not only includes use of office informatics such as word-processing and databases but also more extensive applications. For example outreach approaches to reduce non-take up of welfare benefits can counterbalance the threat of a surveillance society and reduced privacy (Morgan & van Oorschot 1996). Availability of large datasets with personal information provides increased opportunity for epidemiological research, be it medical or social, through the use of secondary analysis or data-mining techniques (Hakim 1983). The introduction of national personal identification numbers and large-scale information systems such as the *Crossroads* databank of the Belgian social security organisations substantially reduce the bureaucracy for citizens. The widespread dissemination of information pillars allowing access to labour market and job information aims to reduce unemployment by matching demand and supply of labour, an example of which is provided by the Flemish WIS-system.

It is fair to recognise here, in the comfortable situation of hindsight, that there have also been some blind alleys and some erroneous predictions in the role new technology would play in service delivery. In part this derives from a mistaken assumption that there was a correlation between the capabilities of the technology and the work and organisational requirements of the human services. Some of the dead-ends have been the development of expert systems in complex areas of risk assessment and intervention where it has not proved possible to codify the rule base of expert judgement (or agree on what constitutes expertise) in domains which are complex and multidimensional (Berg 1997).

These examples serve to illustrate the challenge that the information society faces regarding the enhancement of social quality in Europe. Developments not only put new or reinforced social issues on the agenda, but also provide the necessary context to develop and implement innovative approaches to social policy.

Revisiting the information society

We have argued that the information society remains in the literature a contested concept, although certain pathways can be identified by which the informatisation of society occurs. Some quantitative benchmarks can be put down to measure the expansion of usage of ICT although clustering them into quantitative thresholds or scales remains problematic.
The concept of social quality equally remains problematic, but we have suggested that the scope of the relationship between information society development and social quality can be considered under three headings - applications, social issues and approaches to social policy - although it is evident that all three interact with one another. We have subsequently argued that the developments underlying the information society bring both threats and opportunities regarding social quality. The balance between positive and negative effects is not technologically determined but to be influenced by policy actions. New approaches to social policy taking into account the achievements of the information society can substantially influence this balance. They currently do not call for increased technological progress, rather for action in the field of applications and dissemination of results. It has not been our brief to argue a categorical empirical or theoretical position, indeed we would argue that informatisation is such a dynamic process that any such closure would be premature.

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Social work and information and communication technologies: the tortoise and the hare?

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Abstract

Both social welfare and learning delivery are changing, but they do not mirror each other in terms of their progress. The Human Services have been undergoing a business redesign process but have taken limited account of the role of communication and information technologies for training; or for external networking purposes. The more traditional tertiary education institutions have been integrating C&IT by harnessing it, but for traditional teaching methodologies and could be in danger of losing their students to more progressive teaching and learning businesses. This paper explores the impact of communication and information technologies (C&IT) on human service teaching and learning.

Introduction

There are now enough developments within communication and information technologies to last social work a long time. What we need is time to develop a critical mass of materials and users as well as understanding how we can best use the technology to support social work practice and learning in its many forms. The speed of development in the communication and information technology field (C&IT) means practitioners, educators and learners may have to catch up on the run to steer developments or be overtaken by events. At the same time social work is not standing still but being reshaped and reframed as the mixed economy of care gains ground. The aim of this paper is to examine some of the strands of change.

Mixed economy of care/ mixed economy of education

Just as we have seen the growth of the mixed economy of care we can expect to see growth in a mixed economy of education and training. In terms of social welfare countries are re-examining their welfare policies. Thus we have seen the introduction of concepts such as 'care management' in the UK, 'managed care' in the USA and the Finnish 'seamless care'. These ways of working are an example of the mixed economy of care; often splitting the purchaser and provider functions between public and private sectors and increasing the importance of information management and networking. There are concerns that governments cannot afford to pay for the levels of care seen in the past and are therefore moving the cost to families and for profit organisations (EU, October 1997). These shifts in policy towards privatisation are already resulting in a more disparate social care workforce both in terms of levels of qualification and organisational spread. This impacts on how and where education and training is delivered with the boundaries becoming increasingly blurred between qualified and unqualified workers.

Alongside these social policy changes there are shifts in the professional roles of health and welfare workers. Just as nurses are taking over some of the roles traditionally reserved for the medical professions; social care workers are taking over some of the work formerly undertaken by qualified social workers. Equally the boundaries between health and social care professionals are blurring as inter-disciplinary working and inter-professionalism grows. Interprofessional education can be defined as a learning process in which different professionals learn from and about each other, in order to develop collaborative practice. Multi-professional education is defined as a learning process in which people from different profes-

sional backgrounds learn together.

In theory, and to some extent in practice, 'interprofessional' and 'multi-professional' education and training is becoming more frequent as the human services converge. (NHS 1997) This is seen as potentially achieving economies of scale in teaching common curricula areas. It is also better preparation for the multi-disciplinary work necessary for achieving the best outcomes for service users. This scenario lends itself to a continuum of education and training with a flexible health and social care workforce moving across roles: through lifelong learning and modular accreditation routes such as the UK based National Vocational Qualifications (NVQs). These modes of learning in turn place demands for creative styles of teaching and learning and C&IT has a role to play in delivering the curriculum, tracking learners' portfolios and the administration of courses.

There are very positive aspects of recognising and meeting the learning needs of the often neglected social care workforce, which is many times larger in number than qualified social workers. However, the focus on social care is increasing the possibility of deprofessionalising social work. In terms of university education, social work is already seen as a 'vocational' rather than 'academic' subject and within the UK there is the real threat to social work's academic status. This is the converse of what has happened to nursing in the UK, which has only recently moved from schools of nursing, linked to hospitals, into the university sector. In the UK many qualifying and post-qualifying courses are shifting from Faculties of Social Science into Schools of Medicine and Allied Professions. These moves support the medicalisation of social work. Within this arena social work is in danger of losing control of its own destiny, as it becomes one rather poverty-stricken area of health. Indeed 'health and social care' as a term has slipped into common usage in the UK's Department of Health with its concomitant change of focus.

The role of learning technologies in the curriculum

Within university settings in the GDP countries the infrastructure is generally in place to deliver a wide range of learning technology now. There may still be problems in delivering sound and quality video to students over internal and external networks because of lack of speed and bandwidth. There are probably not enough high specification computers but the main elements are in place. The developments in infrastructure have tended to be led by centralised computing services without enough input from teaching and learning specialists. Hence the preponderance of computing 'laboratories' rather than environments designed as 'people and digital learning spaces'.

The picture is still very different in the non-GDP countries though mobile telephone communication and data delivery via satellite are beginning to be seen as alternative delivery mechanisms albeit expensive. The inequalities in technology availability will remain an issue for the human service community for some time to come.

The global network of universities has a major Internet access advantage over training settings within practice. Many practice settings have internal networks but most still rely on the telephone and fax for external communications. Managers appear fearful of allowing workers to access the Internet even where there is availability. One example is a large agency with a non-Windows based intranet. They also have a very sophisticated award winning web site but at the

moment it is only accessible to those inside the agency through a text browser and there are constraints on other web sites they may visit.

The ability of learning technology to diversify where and how people learn means that home or work based study is on the rise. But learning from home or within the community is still problematic. The initial hardware and software required is costly as are the on-going costs of Internet and telephone service provision. There are some probable breakthroughs imminent and a speed race is underway. Internet access via cable and television is already available and there are experiments with piping data through electricity cables through to the domestic socket.

No doubt in a short time our current modes of digital communication will feel like the tortoise rather than the hare. Video-conferencing and virtual universities will be more easily available outside of specialist centres. But the technology is in many ways the least of the concerns for the future for social work educators and learners.

The development of learning technologies has forced the examination of new approaches to learning. The very words 'learning technologies' have only been current for a short period and have been used deliberately to focus on the activity of learning rather than the teaching or the technology. It is envisaged that "a significant part of learning activities will be based on quality software content and services which are relevant and differentiated according to the student's needs." (EC, 1997, Pg. 8) The classroom might be physical or virtual but "will be part of a learning network offering a rich palette of learning activities" suitable for the range of learning styles. It is within this context that the evolution or revolution still needs to occur. New approaches to learning require a critical appraisal of traditional teaching styles and the new learning methodologies and it is likely that a synthesis of both will be the way forward. Even this evolutionary approach will change the roles of the educator and the learner considerably. The educator turns facilitator whilst the learner needs to become more actively in control of their learning.

One way of looking at learning technologies in the social work curriculum is to differentiate between:
1. Learning information technology skills or 'informacy' as it is called in the previous paper;
2. Learning about information and information management in social work practice (social informatics);
3. Using technology to learn social work skills and knowledge.

1. Learning information technology skills
Learning communication and information technology (C&IT) skills is becoming less problematic as the use of computers gains ground in societies. Students increasingly come into tertiary education expecting to use the technology in their learning. The role now is to introduce students to the particular idiosyncrasies of the networks and programs to be used rather than teaching them how to use a mouse or switch on the computer. Employers will, and already are, expecting students to have relevant skills in this area.

Academics still have some problems coming to terms with the skill learning required. This does not relate to their inability to learn but rather the lack of impetus. Universities reward academics for research rather than for teaching and there are few rewards for implementing learning technology.

Academics do not appear to have problems with the technology if what they wish to do is use it for research. They become more interested in C&IT for teaching as their student

numbers grow and there is less resource to deliver the curriculum. The expansion of open and distance learning is currently driving courses to consider learning technologies as a delivery mechanism. The majority of the presentations at the US national conference 'Information Technologies for social work practice and education' in September 1997 focused on open and distance learning using learning technologies. Most, however, replicated traditional learning methods using new media rather than making a leap into new teching and learning styles.

2. Learning about information and information management in social work practice (social informatics).
Much of the literature associated with the use of information technology in social work has been about the impact of information technology on assessment, care planning, information and information management. (Geiss & Viswanathan 1986, Rafferty 1995, Steyaert 1996) This important subject is still not receiving the attention it deserves in most social work education and training. The medical professions have been more successful in getting health informatics integrated into the curriculum. Many social work schools touch on the subject but few have succeeded in having it recognised as a key component of the curriculum. There have been attempts at developing technology based learning environments for this subject but it nevertheless remains a development need.

3. Using communication and information technology to learn social work
The third strand is the use of C&IT within learning. Standalone and locally networked technologies can be used to develop new methods of teaching and learning: for instance collaborative or open and distance learning become much easier to manage using learning technologies. Current uses are: as a replacement for direct teaching; to supplement teaching; as a source of learning materials; to aid analysis; to develop critical perspectives; and to aid revision. The funding bodies for universities in the UK have taken this seriously and funded over £30 million of courseware development in the last four years but unfortunately only a tiny proportion of this was spent on social work developments.

Meanwhile the development of social work content on the World Wide Web has begun to revolutionise students' and teachers' perceptions of learning technologies. We now have examples of courses being offered nationally and globally through this medium. There has been an explosion of social work web sites and electronic library developments with many more journals putting their contents and abstracts on to the web. A growing number are now e-journals with all the content available through the web but there are still funding and copyright issues to be resolved and these need to be done on a global basis. The technology exists for richer learning environments such as virtual reality. Yet it is difficult to foresee how social work will afford to develop state of the art environments.

The International Association of Social Workers (IASSW) is planning to carry out a census of social work education with the intention of identifying a global social work curriculum. National and global standardisation of curricula and learning technology delivery through the Internet are both on the agenda. These could be flexibly delivered to the workplace, to learning centres or to individual homes.

Conclusion

Tertiary education is going through a period of change and it is very unclear how it will look in five year's time. The technology push is towards a global learning environment where students have a 'learning account' and can take courses wherever they wish. There are immense difficulties in restructuring accreditation and assessment methods so that modularised awards can be credited towards an internationally recognised qualification or degree. New Zealand made intense efforts towards this mode of learning but are now running into difficulties as employers refuse to give value to this type of degree. There is a tension between old and new ways of academia. Concerns about the nature of academic learning are real and there are dangers in taking on the new without examining and finding out what is worth keeping of the old. Tertiary education has just started rather haphazardly going through a business redesign process and the management of innovation and change and research into its impact will be key to whether it is successful or not.

This paper does not attempt to capture the diversity and complexity of the changing nature of both social work and education and learning but rather aims to highlight pertinent areas. Both social welfare and learning delivery systems are changing but they do not mirror each other in terms of their progress. Within ICT the revolution is alive and well and will continue to change the shape of society in terms of both employment and learning patterns but social work's use of ICT is evolving slowly. Social work has been undergoing a redesign as the result of social policy changes which in total do add up to a revolution in terms of social welfare. Although many of these changes rely on easier and more integrated information processes social work has taken limited account of the role of communication and information. Whilst the more traditional tertiary education institutions have been integrating C&IT by harnessing it to existing teaching methods; they have not gone through a redesign process; and are in danger of losing their students to more flexible teaching and learning businesses. There is a growing tension between the traditional learning systems and agencies which are slow to evolve and the IT revolution which is like the hare widening the gap from the tortoise all the time.

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Using technology to forge new allegiances in social work education

Bruce D. Friedman, Dane Ward and Art Biagianti

Abstract

The past few years has seen a rapid growth in information technologies. Social Workers have traditionally not been very astute to the technical field yet by the year 2000 social workers will be forced to "embrace information technology or to choose another profession." This paper presents a way to integrate technologies into a baccalaureate social work curriculum. There are implications for integration of technology into an MSW curriculum.

Introduction

The practice of social work will be heavily affected by the availability of information technologies. This shift in the practice paradigm will require significant curricular shifts in social work educational programs and a major reskilling of current social workers. Social workers will need to be fully competent in the use of information technologies. By the year 2000 those who chose social work because it was not viewed as a technical field of practice will be faced with making critical career decisions, either to embrace information technology or to choose another profession (Gingerich & Green, 1996, pg. 26).

As Bloom (1975), Hogeweg-de Haart (1984), and others have identified, practitioners are not keeping abreast of the research literature in social work. It is clear that social work educators must keep up with new technologies if our students are to learn skills that will provide a platform for lifetime learning. How then do we help social work students become knowledgeable about new information technologies and resources, which will allow them to remain current with research and other developments in social work?

Promoting the relevance of information technology skills

Student interest in achieving the knowledge and skills to successfully utilize information resources and technology is directly related to the information technology skills used to succeed while in Social Work programs. The more faculty require students to utilize information technology skills the greater the skills students develop. However, it is rare for students to seek and acquire technology skills on their own. This is partially because of the magnitude of the work expected of students in order to complete the program, they have little time to reflect or venture out on their own to develop skills that are not related to the curriculum. Unless the student can see the relationship to acquiring the skill, then there is little likelihood that the student will seek to learn the skill on his/her own. This is evident with the advent of the word processor, or word processing software package. Since the curriculum is heavily focused on writing papers as a method of measuring knowledge, then students needed to adapt to writing skills. Word processing facilitates those skills. Students saw the value of using word processors to assist them with their papers and quickly learned to use them as a tool in their work. Therefore, to assist students in developing information technology skills, it is important to identify ways that integrate information technologies into the curriculum.

Just what are the types of information skills that students can gain from a social work program to keep them abreast and interested in the current technologies? This question drove the development of a research project to look

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at integrating information technologies into the social work curriculum. As a first step in this process, the types of information that faculty require students to know were identified. This was achieved by reviewing objectives and outcomes from each course syllabus in the BSW program.

The review of syllabi yielded a list of types of information requested by faculty that was then linked to the current technology and resources (such as library databases, the Internet, or community agencies) used to retrieve that information. Once the sources of information were identified, the skills needed to access this information were determined. The ability or desire for faculty to utilize the technology to assist students in gaining that information still needed to be answered. Wilson and Streadfield (1977) and Streadfield and Wilson (1982) found a variety of barriers to the utilization of information by social workers. These included the 'reluctant' and "unskilled" user. Sheth developed this model (1982) one step further by identifying four types (of faculty):

those who were unable and unwilling;
those who were able and unwilling;
those who were unable and willing, and
those who were able and willing.

It can be assumed that those who are able and willing are already having their students utilize technology to obtain information? Conversely, those who are unable and unwilling represented barriers to information technologies for their students.

Can technology skills be taught in a meaningful way that challenges students to exercise their critical thinking abilities? Or must technology training focus only on learning to push the proper button at the right time? The question of how technology benefits the student learner needed to be answered. Bloom's taxonomy provides useful insight into the meaningful teaching of information skills that will enable students to achieve the objectives identified in the syllabi.

Bloom's taxonomy

Benjamin Bloom's landmark *Taxonomy of Educational Objectives (1956)* provides a powerful tool for bench marking our instructional efforts. The work consists of a hierarchical classification of cognitive functioning. From lowest to highest, Bloom's six level schema includes the abilities to

memorize and recall;
comprehend facts, concepts and principles;
apply general rules to specific cases,
analyze, or divide a whole into constituent parts;
synthesize, or construct a new whole from various
pieces; and evaluate.

By comparing class assignments and discussion questions against Bloom's Taxonomy, faculty may determine fairly accurately the levels of cognitive challenge presented to their students. The following example illustrates the relationship between Bloom's levels and various questions and assignments.

A Social Work faculty member and librarian collaborate on a project to facilitate student learning through the use of various library technologies. In addition to using information technology as a means of providing students with social work's essential content, the faculty member and librarian agree to systematically develop a sequence of activities that help students develop and use higher order critical thinking skills. The two collabora-

tors want to foster skills other than those typically required by lectures and textbooks, such as 'recall' and 'comprehension'.

By necessity, students must use lower level skills to grasp the content of any subject area. However, the important point is that faculty are aware of when and how often students are asked to apply these skills. During one class, for instance, the instructor asks students to name the electronic index that contains journal research in Social Work. To answer this question, the students need to **recall** information (Level 1) from a previous lecture or hands-on experience. Later, the students are asked to explain the difference between the electronic catalogue and the electronic indexes in terms of their contents. This question requires students to **comprehend** (Level 2) differences between resources citing books and articles.

Coping with the higher order cognitive skills requires practice. After a hands-on introduction to the electronic version of Social Work Abstracts, students are permitted to search for articles on their specific research topic. In order to conduct effective searches, they must **apply what they've learned** (Level 3) about the concepts associated with electronic information retrieval. Prior to this exploration of the databases, students will need to focus their research projects, possibly through an analysis of their topic (Level 4). This may involve identifying (and then studying) one or more of the various social, economic, political, historical, and geographical features that make up their broader topic area.

Later in the semester, students will need to pull together or **synthesize** the information they have found in such sources as the online Encyclopedia Britannica, the electronic library catalogue, Social Work Abstracts, and the World Wide Web (Level 5). This is a typical component of research, but technology now allows students to find more information than ever before. Student ability to **evaluate** the quality and credibility of information is critical (Level 6). As a result, the two collaborators provide students with some guidelines for evaluating information, and then, periodically throughout the semester, provide information samples from various sources they discuss in class.

This taxonomy can be used across the curriculum as a tool for integrating technology into the learning process. To begin, it is important to understand that the technology does not replace knowledge in the field but is only an aid to assist students in acquiring the knowledge. The use of technology helps the faculty member facilitate student learning. It helps the faculty member become a 'guide on the side' rather than a 'sage on the stage', (King, 1993). The faculty member is still responsible for directing student acquisition of knowledge but is not responsible for being the sole source of that knowledge, as in a lecture. Now the student takes a more active role in learning rather than relying solely on the faculty member. Thus technology has changed the way that information is obtained and the way that learning occurs. This experimental model of learning is more closely aligned with the practice model of field education, only now the student uses technology to gain knowledge in a particular curricular area. To accomplish this task, the faculty member must become

comfortable with the technology in order to apply it to classroom assignments.

Understanding technology as a classroom tool

In the above abbreviated version of a possible activity sequence, active learning and advanced cognitive skills co-occur in Levels 3-6. Bloom encourages us to focus more attention on these higher levels. According to Gardiner's summary of research (1994), the great majority of courses in higher education focus on students using lower cognitive skills (memorization and comprehension). Raths (1967) suggested that the ability of students to use critical thinking is directly linked to their opportunities to practice it.

Technology provides many such opportunities. In fact, the instructional model of resource based learning is founded on the idea that significant learning takes place through interactions between students and information resources or technologies. In this context, the instructor becomes a facilitator (King 1993), who sets the scene, and provides the parameters within which the action takes place.

Through resource based learning exercises, students learn experientially through application, analysis, and evaluation what they formerly understood only through memorization and comprehension. To some degree, the examples for Levels 3-6 above illustrate this model. Resource based learning represents a switch from the traditional classroom, and may at first be disconcerting to the instructor. Rather than the quietude of a lecture hall, the faculty member hears the engaged discussions, debates, and noises of creative problem solving. In addition, students will challenge the instructor.

The variety and number of resource based learning activities are as limitless as the resources and technologies themselves. The following description of technologies relevant to Social Work may serve as a jumping off point to explore more specific applications.

Enhancing traditional teaching and course management using technology

There are three areas where faculty members can use the technology to enhance their ability to transfer knowledge. Technology can provide faculty with a presentation tool, a management tool, or an instructional aid. For example, using such programs as *PowerPoint* or *Corel Presentation* faculty can clearly present class materials in a way that students can easily understand. It forces the faculty member to organize notes in an outline format presented to students. In addition, notes for each class can be saved on a diskette for students to review between classes. Presentation software also transfers the focus of the content from the faculty member to the content of the presentation itself. Thus, presentation software and electronic presentation of material is an effective way to cover material.

Second, faculty members can use software to assist with classroom management. There are a number of electronic grade book packages that help in student management. The electronic grade book is a way to provide continuing feedback to students as to how they are performing in the class with minimal work by the instructor. Many times the instructor will wait and calculate grades at the end of the semester. Electronic grade books provide instant feedback on the status of the student each time assignments are entered into the system. The grade book program reduces the time intensive efforts of tracking and grading students since the computer package will do it for you. This leaves more time for the primary role of the instructor, instruction, rather than classroom management.

Third, technology can be used as an instructional aid. In asking student to apply certain assessment tools to learning, the focus changes from content to process. An instructional aid helps to reframe the learning back on to the content. As an example, students may lose sight of the practice value behind genograms because they are not artistically inclined. The ability to draw straight lines and connect people to each other can lead to stress and mess where students may just give up on the process. However, by using a genogram program, like **Relativity**, the focus is on the content rather than the aesthetics. The program becomes a useful assessment aid rather than a frustrating and unsuccessful art project. These tools are applicable throughout the social work curriculum. It just takes some thought about how they are used. However, faculty need not think that they must identify these technologies alone. By partnering with librarians, the faculty member may discover many valuable technologies and collaborations that may be applied to the curriculum. This also creates an instructional technology support system that assists in the dissemination of information for lifelong learning.

Understanding information needs through Syllabi

Instruction is the primary focus of faculty. This project looked at all the assignments that faculty were asking students to perform and then correlated them with the current state of the technology. Course syllabi were evaluated to ascertain the nature of the assignment as well as whether that assignment could be integrated with other aspects of the curriculum. There are five curricular content areas in the Bachelor of Social Work (BSW) program: Policy, Methods, Human Behavior in the Social Environment (HBSE), Research, and Field. Assignments in each of these areas were identified in relationship to sequences within the curriculum. Below is a list of the types of assignments that each content area expected.

Policy
There were two types of assignments that were being asked in policy. First was an understanding of a particular field of service from a historical perspective. Second was knowledge and information about current fields of service.

Methods
Methods assignments focused on looking at the application of the Code of Ethics to the field, use of self in the intervention process, and then looking at specific practice innovations. These practice innovations ranged from individual, family, group, or community depending upon where in the methods sequence the student happened to be.

HBSE
The Human Behavior sequence helped students focus on different theoretical issues, whether it was micro, mezzo, macro, or the interaction between them. It was identified that there was usually a close link in assignments between HBSE's theoretical content and the skills within the Methods course sequence.

Research
The primary focus within research was to teach quantitative and qualitative methods to assist students in identifying ways that they could assess their own practice.

Field
Within field, students needed to learn about their particular field of practice and the nature of the interventions to perform in that field. The field content does correlate with other areas within the curriculum and assignments, particularly within methods, were closely linked to experiences gained in the field.

From this look at the types of assignments, it was evident that the knowledge that students gained from doing an assignment in one curricular area could be integrated into information needed in another area. The researchers then needed to identify the technologies that would support each of the particular assignments?

Integrating technology into specific curricular areas

Of the nine CSWE (Council for Social Work Education) curricular standards four are easily integrated into the five content areas. For example, 'social and economic justice,' 'populations at-risk,' 'social work values and ethics,' and 'cultural diversity' were assignments within the five content areas of: Social Work Practice Methods; Research; Social Welfare Policy; Human Behavior in the Social Environment; and Field Education. Examples of how technology might be utilized in each of these five are described below.

Policy
The World Wide Web represents a rapidly expanding information resource for policy courses. New textbooks are being developed with web linkage. As it takes a number of years for a text book to be published (at the rate of policy change the book is out of date by the time it reaches the market), linkages to web sites can provide the most up to date information on a particular subject. For example, the new Karger and Stoesz (1998) edition comes with a web page that has links to various policy related web sites. Each of the policy areas relates to a chapter in the book. The information in the book can be updated by accessing the web. This is very helpful for students who are trying to find information about either the history of a particular field of service or the current status of that field. Librarians are trained to identify other electronic resources, whether on the Web or CD-ROM, and provide valuable assistance to faculty and students in finding appropriate information. Since the web is unmoderated students need guidance on learning critical thinking skills to be able to assess the value of the information they find.

Methods
Methods courses have used a variety of technologies to assist in skill development. When video recording was introduced, it became a way to assist students in visualizing their affect in interviewing situations. The new technological advances can be viewed in a similar manner. For example: Internet discussion groups that provide self help support for those participating can provide first hand knowledge about the issues clients want addressed. Since they are on the Internet, it is possible for students to listen to issues (lurk) without performing any type of intervention. Once the student obtains sufficient information

about the concerns being addressed, then skills can be developed that can be tested through class or field supervision. This helps students gain information and knowledge about a variety of different areas that they may normally not be exposed.

There are also a number of tools that can be used to assist the student practitioner in developing assessment skills. Some of these include: mood software (assists with diagnosis similar to the DSM IV); *Ecotivity* (makes ecomaps); or *Relativity* (makes genograms). There is some skill development software available as well. One such software package is *I-View Skills,* designed to help with interviewing skills. Although dated, it electronically walks students through the process of interviewing. In this manner, the student can work at his/her own pace until competency has been achieved. New interviewing packages are under development and should reach the market soon. With the explosion of information technologies, it is important for faculty to work closely with librarians. The librarian can then tune into the curricular needs of the faculty and identify new materials that relate to student skill development. These materials can then be acquired by the library for university use.

The web also gives the student access to the 'Code of Ethics'. This enables the student to be able to continuously check and monitor actions with standards established by the Code. This simplifies ways that students can include information from the Code into papers and readily integrate the Code into practice.

These are tools to assist the student in developing practice skills but also provide a foundation for continued growth and knowledge development. For example, in the macro practice segment of the methods sequence, students were able to use web resources to determine the nature of the problem and the density of services in a particular geographic area to address the problem. This was helpful in designing a particular intervention strategy for community change. In addition, students were able to identify a list of referral resources and began to learn information referral skills that are needed as they enter the field.

HBSE
Some of the technology used in HBSE is the same as that in practice methods. The difference is how it is used. In methods, the technology is used as a tool for the practice of social work. In HBSE, the same tools are used to enhance the theories that drive those methods. For example, using ecomaps is a practice method to assess the flow of energy in the client's ecological environment. Understanding how ecosystems relate to the treatment process is a theoretical function that builds on cognitive level processes. Genograms are helpful in understanding the historical factors of the client system family. Therefore, the same tools used in methods would be the ones to assist the learning of the theories in HBSE. These are very important assessment tools that aid students in gaining a fuller understanding of meaning behind the problem.

Research
Research courses are well suited to technological applications. Computer technology can help with data analysis with programs like *SPSS, SAS, SPPC,* and others. Thus, the student can become a consumer of statistics and focus on understanding the usefulness of the statistical test rather than worrying about whether the correct answer was achieved. However, there is more to research than doing statistical analysis.

There are now programs that will help with qualitative data analysis. Such programs as *NUD*IST, Ethnograph,* or *HyperResearch* help qualitative researchers analyze data that was once relegated to cutting and pasting. The technology helps students critically look at qualitative data, such as interviews, to see whether thematic trends emerge. This is now done electronically where before it was very time consuming and labor intensive. This process makes it more attractive for students to pursue and assist in developing baselines for their practice and then be able to assess their practice effectiveness.

Librarians also have access to a variety of databases with statistical information that can help students answer their research questions. Census databases and other governmental documents are traditionally housed within libraries. Librarians can help social workers sift through this information to find the appropriate source.

Field

There are many applications of information technology in the field. As agencies merge and become more specialized, IT can be used to help find new resources for information referral. Communities are turning to electronic ways to store information, stored in libraries, about agencies. Through computer databases it is quicker to locate agencies that can assist in making the referral. Within field, students used ommunity databases to identify agencies to assist in information and referral of client systems. In addition, students were able to use web resources to gain information about specific problems that could be applied to situations in the field. Many times field instructors sent students back to the library to explore questions that emerged in the field but the agency did not have the resources to gather the information. What was discovered was that once the students realized the power that they had with the technology, they were able to apply it in a variety of different ways.

Integration of student learning experiences

As previously mentioned, the biggest asset was that students were able to integrate the use of technology needed in one course to enhance another course. For example, students becoming comfortable with the technology and using electronic presentation software in one course soon used it in other courses as well. That was only one level of the integration, though. Students were also able to take information, for example about a current field of service, and apply that information across the board. The HBSE and Methods linkages have already been discussed, but in essence, this use of the technology across the curriculum aided in the development of the student as well as the ability of the student to become better critical thinkers.

Future trends

Technology has always been used as a tool to simplify our lives. The technology does not replace what we do, only acts as an aid to help us do it better. As social work educators, one can embrace the technology to assist overcoming student fears regarding it. Technology can become a tool for our own practice. One of the easiest ways to begin is to look at ourselves and identify ways that we can use technology to assist in the learning process or to make our own lives easier. This may be as simple as switching to an electronic grade book or trying to use one of the electronic presentation software packages in presenting a lecture.

Integration of curriculum with technology leads to the development of information literacy, a four-stage process. The process involves:

    Identifying an information need;
    Locating the information;
    Evaluating the information;
    Using the information.

The integration of the information literacy process and Bloom's Taxonomy into a social work curriculum empowers students for lifelong learning.

Technology is part of our society and culture. If there were no technologies then there would be no growth and change. Instead of trying to do things the old fashioned way, it is time to look at technology from a positive perspective and experience it. We use pieces of technology in every aspect of our lives, why not incorporate it as part of our social work curriculum?

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Editor's note: Much of the software mentioned in this paper is catologued in the Resource Guide prepared by CTI Human Services and available at http://www.soton.ac.uk/~chst

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ImPACt Increasing the IMPACT of assistive technology

Impact is a European funded project to develop learning materials on assistive technology for social care professionals.

Impact has recently circulated its first newsletter. It contains an outline of the project and its aims. If you would like to be kept informed about the progress of this project, which is scheduled to produce training materials on assistive technology for caring professionals both paper based and CD-ROM in summer 1999, contact the project co-ordinator. **causa@fontys.nl**

The first and second stages of this project is now complete and is available from the Impact website as a zipfile. **www.fontys.nl/causa/impact**

Impact also has a contract from the EU to produce a separate newsletter Aging and Disability in the information society. This provides information on EU projects funded under TIDE to work on assistive technology and the information society for older and disabled citizens. The second newsletter has recently been published and may be obtained from **causa@fontys.nl**

A new European network

The European Social Welfare Information Network (ESWIN) is the first on-line comprehensive European information network on social welfare.

http://www.eswin.net

It gives access to social welfare policy and practice in a number of European countries of the UN-European Region, and after a pilot phase with Austria, Luxembourg, the Netherlands, and the UK, is now inviting other countries to participate in the network.

ESWIN's partners are national information experts in the field of social welfare. Their knowledge should warrant accurate and up-to-date information. To maintain the ESWIN web-site means efficient up-to-date and effective knowledge and maintenance structures. This is why it is mainly based on already existing social welfare information structures, however, some countries have rather less developed formal infrastructures, this initiates the construction and organisation of a new valuable management information system.

NB Internet access is not essential, all information can be retrieved for those without the facility by sending a written application for information to the ESWIN Centre (see below).

Information on: government policy and legislation, government publications, policy developments, grey literature, standards, projects, organisational directories, information collections, e.g. libraries, WWW directories, statistics and documentation on the provision of services, and social welfare summary fact sheets can be retrieved from the ESWIN site.

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The information age: economy, society and culture: volume 1- the rise of the network society

Book review by Bob Sapey

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Manuel Castells, Professor of Sociology and Planning and Chair of the Center for Western European Studies at the University of California, describes himself as a dinosaur - a social democrat in a world where it no longer has any real relevance. This is an important point to make at the beginning of this review as the subject matter of his three volume work - economy, society and culture in the informational age - is one that can and has been approached from different perspectives. Castells' perspective is both critical and rigorous while retaining a genuine feel for the position of individuals in the new global economy and society he describes. From the very start of this book I felt that I was reading something that had meaning for people in the field of human services and Castells' early rejection of postmodernism as an indulgence '*in celebrating the end of history, and, to some extent, the end of Reason, giving up on our capacity to understand and make sense, even of nonsense*' (p. 4) was refreshing to say the least. Rather, what he does within these three volumes is to bring together a vast array of empirical data from around the planet to examine and explain the changes that have been brought about by the technological and informational revolution.

Castells makes an analytical distinction between an 'information' and an 'informational' society. While information has always played a part in social and economic developments, he argues that '*the term informational indicates the attribute of a specific form of social organization in which information generation, processing, and transmission become the fundamental sources of productivity and power, because of new technological conditions emerging in this historical period*' (p. 21). This sets the scene for his analysis of an informational revolution which is having as significant an impact on the world as the industrial revolutions had in the past. In this, the first of his three volumes, he concentrates on an examination of the impact of informationalization on the organizational aspects of a globalized capitalism and on the transformation of employment patterns for people throughout the planet. He also explores some of the more direct social implications of the technological changes that have been taking place.

As the title of this book indicates, what Castells identifies as significant throughout the global economy, is the importance of networks as part of organizational structures. Weber's analysis of industrial capitalist organizations brought forward the notion of bureaucracies and to some extent it has been assumed within modern organizational theory, that the multi-national corporations which dominate our economy today, can be explained in terms of hierarchical organizations that have simply grown to span many countries or

continents. However, as Castells points out, Weber's notion of bureaucracy was in fact quite anglocentric and did not take account of the different structures that emerged from the family, rather than individual based society in Japan, China and Korea. What he does is to acknowledge and explore these differences, but to then look for the similarities that exist with western organizations in order to develop an understanding of what features are important on a global scale.

The networking that Castells identifies occurs at a number of levels and for a range of different purposes. What they appear to have in common is that they provide a structure that is both temporary and flexible, enabling organizations to work together and cooperate when it benefits them but not constraining them after their usefulness has passed. Networking was integral to the development of new technology in Silicon Valley where under the sponsorship of Stanford University, numbers of people were brought together in ways that helped them to share and develop their ideas and then move on into more individual enterprises when the value of that network was passed. The networks of producers and suppliers that surround many Japanese corporations continue to exist for as long as their cooperation is of value. In Europe we see networking in industries such as Airbus which provide opportunities beyond the capabilities of any particular member. However, the development of productive and powerful global networks does have implications for individuals, communities and countries throughout the world.

One of the most significant implications of this globalization is that it is not inclusive. There are countries that are at the core of these networks, notably in North America, Europe and the Far East, while others in Asia and, South and Central America fulfil supportive roles based on their cheaper labour costs, but as we continue to witness through the reports of famine and strife, most of sub-Saharan Africa is socially excluded from the global economy. In a particularly poignant quote from a study by Fernando Henrique Cardoso in Brazil and Mexico, Castells refers to people who are excluded as having reached the status of '*not even considered worth the trouble of exploitation; they will become inconsequential, of no interest to the developing globalized economy*' (p. 133). I feel there are some interesting parallels to be drawn between the concept of social exclusion as an economic process with the consequent creation of an underclass and, the materialist analysis of the construction of disability in western industrial societies.

For those who are included within the network society, work patterns are changing. As technology has made it possible for large corporations to shift and distribute their production around the world, labour organizations in the west have had to to become more flexible and adaptable. As we have ourselves experienced, it is necessary to be prepared to work longer hours with less security in order to remain included. While reading this aspect of the book was often a case of making me think about my own employment experiences, because like many other, I have been living through this period of history, it also made me want to make comparisons with labour relationships in early industrialization. While in absolute terms the position of professional workers today bears no relation to the industrial employees at that time, they may be going through a similar process in terms of being at the centre of an economic revolution and it may be several decades before we can expect the patterns of employment to take on a concern for their social and health needs.

Castells' analysis extends to trying to understand the social impact of technology, beyond the world of work. In the fifth chapter of this book he discusses the concept of 'real virtuality'. He argues that while historically all reality has been virtually received through the symbols of language, the use of technology for communication purposes and in particular the current development of multimedia, brings together the real and virtual worlds in such a way that the experiences are difficult to separate. I am left wondering after reading this whether the preoccupation with information in social services departments might lead to a time, if it hasn't already, where the impairments of disabled people are thought of as virtual, as merely characters in a database alongside the service deficiency reports that become the dominant business of an impoverished welfare provision.

This first volume concludes with a discussion of the social meaning of time and space and how this is changing within the network society. Castells refers to the 'space of flows' to describe a new dimension that is added to our understanding of space which he opposes to the 'space of places'. While it is possible to conceptualize that spatial meanings are changed by electronic communications, I found this aspect of his hypothesis less convincing, or maybe just more intellectually challenging. What did interest me in this discussion however was the analysis of the changes to the space of places. With regards time, Castells proposes that technology with its instantaneous processing of financial transactions and the speeding up of actions such as war, takes us into an era of timeless time. He contrasts this to glacial time, that associated with the ecological formation and development of the planet, and with clock time that became important within industrial production.

There are aspects of this book which appear to enter the realms of fantasy, yet are supported with evidence of changes that are taking place in the world today and of trends which suggest quite clearly that the fantastical is real. Castells provides us with a sociological analysis of global capitalism which will be as significant in our understanding of its impact on people as the work of others such as Weber and Marx in the past. In social work we are concerned with the welfare of those who are, for a range of reasons, unable to provide for themselves within the current economic and social conditions and for this reason we need to include sociology with the social work curriculum. This book provides us with a constructive alternative to much of the postmodern analyses that have been gaining dominance in the recent past, to develop our understanding of those conditions, while not falling into the trap of uncritical worship of the micro-chip.

Telecommunications for older people and disabled people in europe. Preparing for the information society

Book review by Jane Seale

This book presents the results from a study called MART (Market for Telecommunications-based Rehabilitation Study) which was funded by the TIDE (Technology Initiative for Disabled and Elderly) programme. The study was conducted over two years and collected information from surveys, literature reviews and consultations regarding the potential for telecommunications with older and disabled people. The book presents the main results of this study in order to identify, classify and describe a range of applications; analyse their availability, accessibility and affordability and assess the current awareness of potential users of the existence of such applications.

The premise of the book is that there is a great potential for the use of telecommunications with older and disabled people in enabling independent living. The introductory chapter however, only devotes a paragraph to outlining and justifying this premise. I think this may suggest an implicit assumption on the part of the authors that anyone reading this book has on the whole a positive view of telecommunications. If they do not, I am not sure they will be sufficiently convinced to read past Chapter One. We also have to wait until Chapter Two for a description of what the authors mean by telecommunications. This is perhaps a long time for someone who is trying to assess whether this book addressed their needs.

Some interesting statistics are contained within Chapter Three which is devoted to trying to estimate the likely demand for telecommunication applications. In addition there is a significant section that addresses the problem of trying to identify the relative importance of applications.

Chapters Four, Five and Six are substantial chapters which present a huge amount of information about the requirements for telecommunication networks and services.; the influence of infrastructure, services, regulation and market development and tariff and standards on the availability and affordability of telecommunications and the extent to which older and disabled people in Europe can obtain financial support, services and equipment. However, the sections in these chapters are not always well 'signposted' and the summaries and introductions do not always accurately reflect the content of the chapters.

Chapter Five raises important questions for consideration such as whom should be responsible for providing a universal service? There are also a couple of interesting pages in Chapter Seven. For example, Table 13 outlines both the positive and negative potential that telecommunications have and Figure 21 in the summary presents a SWOT analysis of EU policy. Chapter Eight identifies a variety of factors that will influence the uptake of telecommunications. These lead the authors nicely into Chapter Nine which presents 92 recommendations that range from accessibility issues to awareness and attitudes issues.

Whilst the book is targeting a wide readership from equipment providers to policy makers I suspect the book will be of more use to policy makers. However the inconsistent tone of presentation may cause confusion regarding the targeted readership. For example, in the earlier part of the book there a number of cartoons which suggest the authors are aiming at a less technical or serious audience, whilst in the latter part of the book there are numerous 'heavy' tables and figures which suggests the authors are aiming at a more technical or serious audience.

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Technology and the elderly: The role of technology in prolonging the independence of the elderly in the community care context

Book review by Michael Curtin

As with many reports, on first glance this appeared to be another dry and uninteresting read. However the authors managed to avoid this by writing a well researched and argued stimulating and informative publication. This was very evident in the first four chapters where the authors provided comprehensive background information on the European elderly population. This information is a must for anyone who works, or is interested in working, with this client group. Chapter Two set the scene by defining who the elderly were and describing their demography. In identifying the trend towards an ageing population, the implications for health and social expenditure were discussed, in conjunction with pertinent issues about their living arrangements and financial resources.

This leads into Chapter Three which identified the needs of, and the meaning of independence for, this population. Social, medical, activities of daily living and security were the four areas of need which were considered to be important for independence. Living in the community rather than in a residential institution was central to the concept of independence, as was the need for having the resources to have control over one's life. Living in the community formed the basis of Chapter Four which examined issues about and implementation of a community care system. All the points raised in the first four chapters were discussed in the context of the possible role of technology.

In Chapter Five existing and emerging technologies which have a role to play in supporting independence of the elderly within the community care context were identified. The layout of the chapter was structured to compliment the four areas of needs discussed in Chapter Three.

This report did not discuss actual equipment available. Rather it discussed technologies more generally, identifying the main attributes applicable to the elderly population. This was a strength of this report, as unlike a lot of technological equipment, the report will not become redundant for many years. In spite of the contribution towards the independence of the elderly population technologies offer, there were concerns about the availability of existing products and about the lack of funding for emerging innovations.

The final chapter attempted to integrate the information provided in the previous chapters into an overall technology assessment. The emphasis of this chapter was on identifying appropriate technologies and ways of encouraging their production and usage. Suggestions were provided for improving the availability, and for promoting the research and development, of technologies in the areas of personal assistive devices; environmental adaptation and control; home health care; remote care and consumer products; and household amenities and utilities. These were considered to be the five key areas in which technologies can contribute to maintaining the independence of the elderly in the community setting. I would recommend this report to anyone interested in facilitating the independence of elderly people and to anyone involved in the development, promotion or assesses for technologies, as it will definitely inform their practice.

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Expanding post secondary options for minority students with disabilities

Book review by Nadia Clarkin

Smith J, Brown B, Opperman W, Pollard W and Villegas J, (1997)
Expaning post secondary options for minority students with disabilities.
Published by The Association on Higher Education and Disability.

This manual was written to assist individuals working in secondary and post secondary educational settings to better understand and respond to the needs of students with disabilities, specifically those who are also from traditionally under represented racial and ethnic backgrounds. The purpose of the manual is to help programme administrators to use the information provided to identify resources, develop strategies and implement programmes that 'reach out' and include students from these backgrounds.

The manual is divided into five chapters which provide the reader with a background on issues of minority cultures and disability as well as specific information on issues relating to recruitment and maintenance of students in secondary education.

The first chapter - Being Sensitive to Culture - provides a good discussion of issues of cultural diversity in general. It gives an overview of the language and communication and other issues relevant to specific cultural groups, for example racism towards black students and differing belief systems of native American students. While the discussion of different ethnic groups is interesting, only those ethnic groups found in the USA are included. The last part of this chapter deals with disability awareness amongst different ethnic groups and provides educators and administrators with guidance on how to include these important issues in the design of service delivery in their institutions.

Chapter Two looks at Understanding Disability Issues. It provides a good overview of the attitudinal barriers faced by people with disabilities, people first language, some commonly used disability terms, gives definitions including characteristics of different disabilities and potentially applicable reasonable accommodations. It is a practical chapter which also suggests a number of tips for communicating and interacting with people with disabilities. The final section deals with the issue of funding, however, the information detailed is only relevant to American students.

Chapter Three deals with Education and Disability Law. It gives a good overview of the US federal laws governing issues of disability - The Individuals with Disabilities Education Act (IDEA) 1975, The Rehabilitation Act 1973 (section 504) and the ADA 1990). While the detailed descriptions and reference to US disability law are only of direct interest to American programme administrators they could serve as a model of good practice for other countries to adopt. This chapter discusses 'Individual Education Plans' (IEP). As part of IDEA, students with disabilities in secondary education who are eligible for services under IDEA must have an IEP. When students reach 16 in the USA their IEP needs to be reviewed and an Individual Transition Plan (ITP) needs to be drawn up providing a statement of interagency responsibility and linkages for life after high school. There is a detailed description of what is involved in drawing up an IEP and an ITP, of how these forms are used and some sample forms are provided. Concepts similar to the IEP are used in other countries and the models of IEP and ITP are very useful tools for educators from countries which do not already use such plans when implementing educational programmes for students with disabilities.

Chapter Four - Recruitment and Outreach of Minority Students with Disabilities. This chapter discusses a number of methods that program administrators or educators can use to increase participation of minority students with disabilities. Again, much of the reference is to how the State Department of Education system works with regard to Special Education programs in the USA. A short but useful section suggests ways in which to use media and public relations activities to disseminate information about outreach programmes. There is also a discussion about the benefits of having an advisory panel made up of parents and representatives of

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various cultures in local communities to assist a program in anything from suggestions about recruitment strategies to providing feedback on services. The latter section of this chapter discusses the issue of parental support and involvement in their children's education. It talks about different cultural perspectives on education for students with disabilities and provides suggestions on the how to work with and communicate with parents of students with disabilities.

Chapter Five - Components of a Model Program. This section includes practical information for program administrators to use in developing the way they deliver educational services to students with disabilities. It suggests that in most cases existing programs and services will be suitable for students with disabilities however, the key is to make programs and services accessible. A good description of the types of accommodations that can make colleges accessible for people with different disabilities is given. There are also two instruments included in this chapter. One is an outline on running counseling /workshops for participants with disabilities and the other is a checklist of possible needs of students with disabilities and covers the alternative presentation, equipment and other needs of students with disabilities.

At the end of the manual there is a list of resources and a set of appendices. The resources cover both general resources for the education of students with disabilities and disability specific resources. There are 12 Appendices which provide sample materials and forms on the following range of topics: letters to parents; forms for secondary school personnel; forms student information, student intake forms, needs assessment forms, release of information forms, student contact records form, student action plans, Student progress evaluations, program events and service evaluations, recruitment materials and financial aid information.

As this is an American publication, the resources given are for the USA only and while many of the appendices are useful, some are relevant only for students in America and others might be functional if they were adapted to reflect local issues, cultures and educational systems.

Overall, the manual gives a good description of the issues involved in including minority students with disabilities in education. It also provides a range of practical information, tips and tools to help programme administrators in recruiting and delivering education to students with disabilities. However, some of the material is specific to the USA and would need to be adapted or modified to if it is to be used in another country.