Social informatics: beyond technology

A research project in schools of social work in the European Community

Harmen Grebel and Jan Steyaert

Introduction

The introduction of information technology (IT) in human services has been a slow and tedious process and its impact on service provision has been low. As a consequence, the introduction of IT as a subject in the curricula of schools of social work has been slow as well. For a number of reasons, we have seen dramatic changes in this situation over the past few years. Not only has the threshold to the implementation of IT been lowered by ever-decreasing prices for hardware and rapidly improving software, but a quest for improved accountability in human services has also increased the demand for efficiency and effectiveness and its technologies. In recent years, articles in *International Social Work* and other leading publications have discussed this increased use of IT in human services (Brauns and Kramer, 1987; Colombi et al., 1993), thereby also outlining the growing impact on service provision. Few, however, have focused on the implications of this increased use for the structure and contents of the curricula of schools of social work.

Recent research (Grebel and Steyaert, 1993) has indicated that the education of professional social workers is taking into account the changing position of technology in daily service provision. However, results have also shown that this inclusion of IT in curricula is problematic, as it is based on an out-of-date perspective on the impact of technology on human service agencies.

In this article, we will outline the basic research questions and the method used. We will give an overview of the main areas in which

Harmen Grebel is a consultant for curriculum development in social informatics at Causa of Hogeschool Eindhoven, The Netherlands. Jan Steyaert is a research assistant in the Department of Political and Social Sciences at the University of Antwerp.

International Social Work (SAGE, London, Thousand Oaks, CA and New Delhi), Vol. 38 (1995), 151–164.

IT is being applied in service provision across Europe. Afterwards, the results of the research will show how schools of social work across Europe integrate IT into their curricula. We thereby discuss this integration on four different levels. This gives us the opportunity to discuss the constraints in the present situation. Finally, we will introduce the concept of *social informatics*, which tries to move the present situation forwards by going beyond the technology. It brings together the professional requirements for beginning social workers and educational innovations.

Research questions and method

The research

The research focused on education of the vocational use of IT. It was carried out between January and May 1993. The results were presented and discussed at a seminar during HUSITA-3, the international conference on Human Services and Information Technology Applications.

The leading research question has been whether schools of social work are equipped to educate students to use IT for institutional functioning, support of individuals and groups, support of institutions and networking including international collaboration. This question itself stems from the notion of the increasing use of IT in human services. We do not concentrate on the availability of computers in the schools, but emphasize the question whether the curricula of the schools of social work meet the needs of professional social workers regarding knowledge about the use of IT in social work and the skills to handle it.

Three questions were central in the research:

1. What should the professional social worker know about the use of IT in human services?
2. How far and in what way do schools of social work meet the demands of the field on this subject?
3. What are the constraints?

Method

To gather the necessary information, a survey was devised involving key informants in 11 EC countries (the twelfth, Luxembourg, has no school of social work). Informants were selected from schools of social work and departments of social work in universities. Most informants were known to be involved in EC projects or IASSW

activities or to be contributors to European Network for Information Technology and Human Services (ENITH) publications. They provided information on the different programmes in their country. Table 1 gives an overview of the programmes included in the research. A structured questionnaire with open-ended questions was used. The questionnaire was developed and validated by using it in the two countries which were best known by the researchers, The Netherlands and Belgium. Afterwards, all respondents were invited to give information about the situation in their own school and to compare this with the situation in their country in general. In this way a report per country was generated. In England and Portugal respondents were interviewed. In Greece, Belgium and The Netherlands the report was directly written by the research partners after having interviewed other respondents. Frequent attempts were made to include respondents from programmes that did not reply after the first mailing. We used telephone and fax to contact respondents and motivate them to supply the necessary information. With the exception of Spain, this approach was successful for all programmes. From 10 countries, sufficient information was obtained to proceed.

The results of the research give an indication of the situation in the EC countries. Although discussion partners at the HUSITA-3 conference indicated the report to be quite accurate on the situation in their countries, the results may in some way have been biased by the position of the respondents. Since most respondents were known to be pioneers in the introduction of informatics in schools of social work, complaining about their solitary position, they may have overlooked the situation in other schools.

Research partners and supporters

The research was carried out by Causa in Eindhoven, The Netherlands. Causa is the innovation centre for education in the use of IT in schools of social work and health care. Causa is part of the Faculty of Social Work and Health Care of Hogeschool Eindhoven. Research partners were the schools of social work in the Instituto Superior de Serviço Social, Lisbon, Portugal, and in the Technological Educational Institute, Athens, Greece; and the Department of Political and Social Sciences, the University of Antwerp, Belgium.

A grant from the Commission of the European Communities (Taskforce Human Resources, Education, Training and Youth) made the research and the organization of the seminar possible. The

TABLE 1
Programmes included in the research

	Schools	Professions
Belgium/Flanders	Sociaal Hoger Onderwijs, social assistance	Caseworker Social/community worker Personnel worker
	Sociaal Hoger Onderwijs assistance in -psychology -social advice -physical education -special education	Assistant
Denmark	School of Social Work	Social worker (Counselling in public bodies)
France	Institut Regional du Travail Social	Assistant de service social Educateur specialisé Educateur technique Animateur Formateur d'adultes Agent de developpement local Aide medico-psychologique Professionels de l'aide à domicile
	Ecole Normale Sociale	Assistant social -service departemental -service psychiatrie -protection de l'enfance -enseignement dans entreprises
Germany	Schools of social work/ Fachhochschule	Social worker in: -social administration -work with families -health care -consultancy agencies Work with: -youth -elderly -handicapped -prisoners
Great Britain	University, department of social work Polytechnic, department of social work School of advanced nursing and social work	Social worker Probation officer Residential social worker

TABLE 1
(Continued)

	Schools	Professions
Greece	Technological Educational Institute, department of social work	Social worker Community worker Residential social worker etc.
Ireland	University, department of social administration and social work	Case worker Community worker Groupworker
Italy	University, scuola diretta a fin: speciali per assistenti sociali	Social worker in -public administration -social service -non profit agency
The Netherlands	Hoger Sociaal Agogisch Onderwijs/school of social work, institute of higher professional education	Casework Community work Social work (youth and handicapped) Personnel management
Portugal	Instituto de serviço social/ school of social work	Social work Social administration Community development Probation officer Youth work Social assistant in education
Spain	No information	No information

Hogeschool Eindhoven supported the research project as part of the initiative for deployment of research activities. Organizational support was given by the IASSW and by ENITH.

Information technology and human services

During the first months of 1993, ENITH developed an overview of the different ways in which IT was being used in the human services across Europe. This overview was published (Colombi et al., 1993). It is far beyond the scope of this text to summarize the results of this project, but it is important to note the evolutions in time while comparing this current overview with an earlier one. Whereas an overview of the applications some five years ago mainly showed

administrative use of IT and a broad range of small-scale experiments, today's overview outlines the richness of applications in the very centre of service provision, such as client information systems, benefit calculation systems, information and referral systems and client assessment. The real activity of service provision is hardly influenced by the opportunities created by IT. However, in comparison with five years ago the applications have started to support the primary process of human service agencies in addition to being used for administrative or management purposes. Moreover, these applications are no longer the work of individuals who have a rare combination of human service interest and computer skills, but are now developed and implemented by government and national welfare agencies. Many human services have learned their lesson from their vulnerable position in the 1980s, and are now investing considerably in the improvement of their efficiency and effectiveness. It is evident that computers play an important role in this evolution.

Information technology in schools of social work

The vocational use of IT and the attention paid to this in schools of social work in Europe diverges widely. This outcome of the research may not be unexpected, given the different levels of IT application in social service provision. The differences in the different schools include the level of attention, the level of integration in the curriculum and the availability of teaching materials and equipment.

Four levels of attention can be distinguished: appreciation, application, IT specialist and informatics specialist. The level of appreciation means the ability to appreciate the possibilities of standard IT applications; the level of application deals with the ability to integrate professional IT applications in social work; the level of IT specialist is where knowledge of hardware and software development comes first and experience in the human services second; the level of informatics specialist means human services specialists with the ability to analyse the information process and to advise or decide on the use of IT. We will use these levels to categorize the attention paid to the use of IT in the curricula of the schools of social work.

The appreciation level

Generally speaking, at least some attention is given to the use of IT in the schools of social work in all EC countries except for Italy (see Table 2). Computer literacy appears to be a normal part of the

TABLE 2
Appreciation and application of IT

	No attention	Literacy	Vocational use
Belgium/Flanders		in general	in general
Denmark		in general	incidentally
France		some schools	in general
Germany	some schools	many schools increasing	many schools
Great Britain		many schools increasing	incidentally
Greece		in general	in general
Ireland		in general	no possibilities
Italy	in general		
The Netherlands		in general	in general increasing
Portugal		occasionally increasing	incidentally

curriculum in most schools of social work or is offered on a optional level (Portugal, Germany). In the questionnaire there was no question on the exact contents of courses. Nevertheless we can conclude from the answers that the contents show variation. In Athens (Greece) students are taught computer basics by programming in Basic or Dbase, in theory and practice. In Cork (Ireland) students learn to use word processors and databases for research ends. In The Netherlands students are introduced to the ethical aspects of informatics and also become acquainted with word processing, spreadsheets, databases and telematics. If you have no equipment available for students in a school it will be difficult to introduce computer literacy at all. In Portugal, therefore, the schools in Porto and Lisbon have arranged for their students to attend a course at an outside institute.

The application level

The vocational use of IT is less integrated in the curricula per se (Table 2). The answers may, however, be biased, since some respondents stated they were not able to pay attention to IT's vocational use, since they did not have (the right) equipment or software to do so. The school in Aarhus (Denmark) stated it has a problem teaching the use of client registration systems, since the field systems are all mini- and mainframe based. Opposed to this, the school in Angers

TABLE 3
Curricula, diploma requirements and actual goals

	National curriculum or diploma requirements	Schools' curricula	Learning goals
Belgium/Flanders	not yet existing	A Flemish curriculum proposal on IT has recently been developed	computer literacy and vocational use
Denmark	not actual	seldom explicit	computer literacy and possibilities
France	no mention of IT		filling in deficiency, vocational knowledge, ethical questions
Germany	not existing	not officially	IT literacy, vocational use, scientific use, ethical questions
Britain	no curriculum; diploma states requirement of IT competency	IT competency	IT competency
Greece	National Curriculum: introduction of IT programming; IT in Human Services	departments (schools of social work) form the national curriculum	sensitization, introduction, ethics
Ireland	not existing	none	none
Italy	yes but no mention of IT	none	none
The Netherlands	diploma requirements of IT competency. Advisory curriculum proposal on the use of IT	introduction, vocational use, ethics	departments are introducing the national curriculum
Portugal	no statement of IT	some statements on the use of information	computer literacy

(France) stated it had introduced a course on the ethical aspects of the use of information systems some years ago, without having any equipment available. The school in Athens found a solution to the lack of equipment and teaching materials in visits to 'computerized' human service institutes, the same procedure as was followed in Belgium before the introduction of computer equipment in the schools.

Diploma requirements and formal curricula

Table 3 shows the answers to the questions about the attention paid to IT in a national curriculum or diploma requirements, the attention paid in the schools' curricula and, in the last column, the answers to the question about learning goals. Only in Britain and The Netherlands do official diploma requirements state the competency in the use of vocational IT applications. Greece has a formal regulation for IT teaching. In France, Italy and Portugal the use of IT is not mentioned in the national regulation of curriculum or diploma requirements. The Netherlands has, apart from a statement in the diploma requirements, a national curriculum on 'social informatics'. This is not obligatory, but an advisory model for schools of social work on the implementation of social informatics in their curricula. Some years ago Danish schools set up some aims for IT teaching. These have not been developed on a national scale.

Learning goals

Learning goals in the different schools of social work are not always explicitly stated. In these cases we have to fall back on official diploma requirements.

Learning goals are specified in the above-mentioned Dutch national curriculum on the use of IT for the four main departments of the schools of social work. Overall they state the students' ability to appreciate IT and different kinds of software in an instrumental way and the students' knowledge of the use of vocational applications including the implications of their use for methods of work and organization.

Appreciation, sensitization or basic skills on the level of computer literacy are mentioned for Greece, Denmark, Germany and France.

Knowledge of the use of vocational applications, the ability to judge their usefulness and support their introduction, and consideration of ethical questions rising from the use of these applications are mentioned by respondents from Germany, Greece, Denmark,

France, Belgium and The Netherlands. Some respondents refer to the age of the students and the fact that students gain experience in applications during their internship and learn from that.

Integration or segregation?

The way in which vocational use is integrated in the curriculum of the schools is a question closely related to the contents of IT as a subject. We have distinguished three different forms of integration in the curriculum:

- no integration: a school may offer a course in computer basics, possibly taught by teachers from outside the school. Courses may even be put out to external (commercial) institutes;
- separate discipline: there are specific courses in the curriculum on the use of IT applications relevant for social work, but they are still separately taught, sometimes by a specialist in informatics or the one teacher in social work who is interested in IT;
- integration: in different courses in the curriculum social informatics has been integrated in a planned way, taught by a social work specialist of the department itself.

The three different forms are not exclusive: all three forms can be found in the same schools. Courses to further computer literacy in a first year, taught by an informatics specialist, are combined with an integrated approach in a third or fourth year, where social work specialists offer courses in methods of social work, including the applications of IT.

The Greek situation is an example of the occurrence of different forms of integration. Since 1985 the curriculum has been enriched with two courses: an introductory course in computers and programming and a lab in IT applications in the human services. The introductory course focuses on informatics without any relation to human services and is taught by faculty of the Department of Information Technology. The lab course is headed by social work professors. The first course is typical of a non-integrated approach. The second indicates a separate discipline. This situation is found in most countries. In particular, introductory courses on computer literacy are often given by teachers from outside the school, sometimes by other institutes (Portugal, Ireland) and may have a non-obligatory status (Germany, Portugal). Also, in most countries the use of IT applications is separately taught from core courses in methods of social work. An exception is research courses, where even in schools without any other attention paid to IT applications,

the use of statistical software is at least demonstrated (Lisbon, Wales). Other examples of integration in courses come from Denmark and The Netherlands.

Curriculum integration or the intention to integrate has been mentioned by Dutch, Belgian and Danish respondents. The Danish and Dutch schools state the explicit intention to integrate IT in the different subjects, in the context of core courses of the social work curriculum. In some Dutch schools this integration is under way. As in Denmark, problems are met in the adaptation of course programmes. Success depends to some extent on the competence of teachers and their willingness to change. In Belgium schools tend to an integrated approach, but they are still in the planning stage.

The results from the survey and the available information on the way IT is being introduced in schools of social work across Europe have indicated that the current situation is not tuned to the requirements of present-day service provision. Whereas the impact of IT on service provision has become much more substantial than can be concluded from the apparent number of computers in human service agencies alone, IT is still being taught across Europe as if it were only one of the many administrative tools of a professional caregiver. It is considered to be a technical skill that has little or no relation to the contents of the profession itself. Whereas this was a valid perspective until a few years ago, it is now creating a gap between the education of new social workers and the requirements of today's profession.

Social informatics, more than computers

Human service providers need to have the ability to handle professional information. Professional workers should also know how, where and when to use IT, to fulfil their information needs or those of their clients and those of the management of their agencies. The social work student should therefore be able to appreciate the technology as a means with different functions, but essentially as a means to handle information.

The approach in social work education has changed over the last few years. Starting from computer literacy, we have moved to professional computer competency and now to social informatics. The concept of computer literacy is widely used. Computer literacy is 'The ability to recognize an application in which the use of a computer is appropriate and the ability to use the computer for that application' (Schoech, 1990). This definition suggests, Schoech

remarks, that the computer-literate social worker knows how to use a computer but is also to some extent an IT specialist.

In their definition of computer literacy Reinoehl and Mueller relate the ability to use computers to professional expertise: 'Computer literacy in human services is the ability to use or develop computer applications competently within the context of human service theory or practice' (Reinoehl and Meuller, 1990). They distinguish three levels of ability: beginning awareness, proficiency in use and creative development. Dick Schoech also takes the professional context into account and proposes the concept of *professional computing competency*, to be defined as 'knowing how to use the software of one's profession effectively' (Schoech, 1990). Schoech states: 'Thus, human service professionals with computing competency may know little about the computer, but a lot about the variety of professional software and its use according to professional standards and ethics' (pp. 569–70).

Our research was based on the concept of *social informatics*. In this concept the relation between IT and professional social work is emphasized: *the ability to gather and interpret data efficiently and effectively into functional information for professional acting in social work settings, effectively making use of IT applications*. The concept of social informatics was developed in The Netherlands and forms the leading principle for the development of teaching materials in this area for schools of social work (Van Lieshout, 1993). The concept of social informatics keeps some distance from computer skills and focuses on 'the information the social worker needs in the execution of his or her job'.

The use of the concept of social informatics has some important implications for how one should deal with IT in social work curricula. One of those implications involves the integration of social informatics in a global curriculum, rather than organizing it as a separate course (Roosenboom, 1993). It also implies that the task of introducing social informatics to future professionals is not the sole responsibility of one teacher, but a shared responsibility of the whole staff.

Conclusion

There seems to be reason for worrying when we compare the development in human services with the expectations of the respondents of the schools of social work. Although the findings point to a slow but decisive development in the use of IT in the human services in

most European countries, only in some EC countries do schools plan to introduce social informatics to a consequential extent in their curriculum. Since some extra attention paid to the use of IT may be expected, there is a risk of a purely technical approach in the sidelines of the education of social workers. This will have an effect on the professional status of the social workers. They may have difficulties using the IT applications for the interpretation of their own data and those of their clients. This in a situation where in other parts of society professionals are expected to sustain their opinion on problems and developments with interpreted data obtained through the use of IT.

This deficiency will eventually endanger the amount and quality of services to be obtained by the clients of the social worker. For example, the social worker who is not able to present figures on his or her work with clients will simply lose funding for activities with the client provided by agencies or insurance companies. Again, if the social worker is not able to retrieve relevant information for or on the client by means of information systems, the client will not receive the service he or she could have received otherwise.

Appendix

The questionnaire used in this research was quite substantial and too elaborate to be included in this article. A full copy may be obtained on request from one of the authors. A few examples follow of key items that demonstrate the characteristics of the questionnaire.

- Is there any attention now to the use of IT applications in the human services in the schools of social work in general and in particular in your school? Please list activities and the applications concerned.
- Is there any official *national* statement on the topic of education about IT applications in the schools of social work, for example in a general outline of the curriculum for schools of social work?
- How far are the demands from the field met by the schools of social work concerning the use of IT applications? Please give your opinion and state the possibilities and difficulties.

References

Brauns, H. and D. Kramer (1987) 'Information Technology and Social Work Education in the 1980s: Three Theses', *International Social Work* 30(2): 129–38.

Caputo, R. and R. Cnaan (1990) 'Information Technology Availability in Schools of Social Work', *Journal of Social Work Education* 26(2): 187–98.

Colombi, D., J. Rafferty and J. Steyaert (eds) (1993) *Human Services and Information Technology: A European Perspective*. West Sussex: ENITH.

Grebel, H. and J. Steyaert with B. Gazerian and C. Vayas (1993) *Social Informatics: Education on the Vocational Use of Information Technology in Schools of Social Work*. Eindhoven: Hogeschool Eindhoven, Causa.

Reinoehl, R. and B. Meuller (eds) (1990) *Computer Literacy in Human Services Education*. New York: The Haworth Press.

Roosenboom, P. (1993) 'The Dutch National Curriculum Computer Applications for Schools of Social Work', in M. Leiderman, C. Gusetta, L. Struminger and M. Monnickendam (eds) *Technology in People Services, Research Theory and Applications*, pp. 319–27. New York: The Haworth Press.

Schoech, D. (1990) *Human Service Computing, Concepts and Applications*. New York: The Haworth Press.

Van Lieshout, H. (1993) 'More than Computer', in B. Glastonbury (ed.) *Human Welfare and Technology*, pp. 230–40. Assen: Van Gorcum.