

# New Technology in the Human Services

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Teaching Welfare Benefits by Computer

Benefits Packages Updated

Dick Schoech's Magnum Opus

Community Software in Denmark



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## UP FRONT

We commented in an earlier issue of *New Technology in the Human Services* (Vol.4 No.4) that computerised welfare benefits packages were amongst the most conspicuously successful applications of IT in the personal social services. There are many reasons for this, though perhaps two stand out. The welfare benefits system in this country is enormously complex in its overall structure, and liable to frequent changes in both rules and scales of payment. To be an expert on the subject involves patience, dedication and perseverance, as well as a better than passing understanding of civil service jargon. There are obvious advantages for all of us if a computer can grapple with the complexity, and those who write the software have the dedication to keep the rest of us up to date with the changes.

Second, very few members of the public have the ability to calculate benefits entitlements, and most of those who are asked to help, like social workers, do not have the depth of expertise or the up to date knowledge. People like social workers have a wide range of knowledge to accommodate within the framework of their professional skills, and in any event may not face requests to help with welfare benefits frequently enough to keep their understanding of the system in trim. Again the advantages of a computerised approach are manifest.

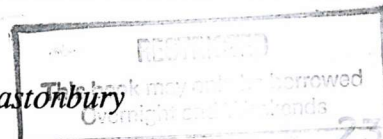
Faced with successful computer applications for practitioners and members of the public, it takes only a small step to enter into the possibilities of using such software for training purposes, both to teach the elements of the benefits system, and to train new generations of welfare staff in the used of the computer packages. In the following

pages Patrick Hayes and Mary Acton take up the challenge, and report on an experiment using Ferret's Maximiser with social work students. The results are fascinating, and an excellent omen for the future of computer aided social work as well as computer aided learning. For those wanting to follow up welfare benefits packages, Jackie Rafferty offers an update of the latest Lisson Grove and ICL's WBA, along with new developments from Ferret.

Keeping up with the educational theme, David Colombi reviews Dick Schoech's new fat book. Costly it is, but nevertheless it will become essential reading for computer trainers, representing as it does the years of experience Dick has gained in teaching social work students at the University of Texas.

Three staff from the School of Social Work in Arhus, Denmark, make up the other contributors to this issue. They have developed and written at length (sadly only in Danish) about two programs involving direct computer use by, respectively, members of the public and social work clients. Their paper, and their excellent command of English, gives us something of the flavour of their work. It tells us both about new developments in local community networking and about a way a social worker and client can share the assessment process. Their work is another example, like Lars Qvortrup's, of a commitment in Denmark to adding quality to life in small communities and urban localities.

Bryan Glastonbury





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# An Exploration of the Usefulness of a Welfare Benefits Computer Package in Social Work Training.

*Patrick Hayes and Mary Acton*

## Abstract

In the light of both the increasing emphasis on the need for welfare rights teaching in social work training, and the practical problems which confront social workers in benefits calculations, the historical relationship between welfare rights and social work is examined, and the potential for Computer Assisted Learning (CAL) in welfare rights teaching is considered. An experiment was used to test whether students, using a computer package devised to calculate benefit entitlement, in conjunction with specifically designed case material, would:

- a) gain more information about welfare benefits entitlement, and
- b) be better able to assess welfare benefit entitlements for individuals, than students working from printed material.

The effect of previous experience and of formal instruction in welfare rights work is also considered. The acceptability of this method of learning to the students is also explored.

## Background

The origins of this present study developed out of a number of different concerns and interests in the Department of Social Work Studies at Southampton University. In the Autumn Term 1989, the CTI (Computers in Teaching Initiative) Centre for Human Services, which is situated in the Department, was invited by Ferret Information Systems to test their Welfare Benefits Computer Package - Maximiser II - and assess its potential application in the training of social work students. The invitation came at a time when the Department was actively engaged in the process of setting up a new two year MSc/Diploma in Social Work (DipSW) programme within the terms laid down by the Central Council for Education and Training in Social Work (CCETSW, 1989a). The new DipSW regulations referred specifically to the need for students to have, *inter alia*, both a knowledge and understanding of "welfare rights and welfare benefits", and to be made aware of the relevance of computer and information technology to the organisation and practice of social work. At the time therefore, it seemed to make sense to see whether or not these two

curriculum requirements could be combined.

## Welfare rights and social work.

The relationship between welfare rights and social work has been, to say the least, an uneasy one, over the past fifteen to twenty years. The CCETSW report on welfare rights teaching (CCETSW, 1989b) provides fairly damning evidence of how inadequate it is nationally, and mirrors, in many respects, the criticisms that had been levelled a year earlier, at the teaching of law on basic qualifying courses (CCETSW, 1988).

The authors of the 1989 report suggest a number of reasons for this state of affairs, amongst which, subject marginalisation, resource constraint, and ideological conflict, appear to be dominant. They also point to some of the "strong traditions in British social work thinking" which have been opposed to its inclusion over the years, not only within the sphere of education, but of practice also. Arguments about practical competence, professional compatibility and credibility, and the political complexities of intervening in



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situations which some would regard as quite properly the State's problem (CCETSW, 1989b, p6) have been at the forefront of that debate. More recently, the view that social workers should not be engaging in such work, for it is seen as not germane to the social work task *per se*, has been forcibly expressed (Stevenson, 1988).

Whatever one's view might be concerning the professional definition of social work, it remains clear that when social workers enter the field of welfare rights advocacy, it does pose problems of both a technical and political order. Technical, because it pre-supposes a skill to be able to determine an individual's entitlement to particular welfare benefits, and political, because it is an activity which seeks to both promote and enforce the take-up of those entitlements (Berthoud et al, 1986, p38).

And yet, despite the very public differences which do exist, there has been, over the last few years, a demonstrable shift in the thinking of some important sections of the British social work establishment on this matter. Until the mid-1980's, welfare rights held a relatively low profile on CCETSW's training agenda, perhaps for the technical and political reasons mentioned above. Neither did it have a particularly high profile in social work research. In the twenty years since the establishment of the British Journal of Social Work (BJSW), we could trace only one article which addressed itself specifically to welfare rights (Hill, 1974), and one which addressed the area of advocacy in social work (Jordan, 1987). More general issues of poverty and welfare have also been significantly under represented in the research journals. In a recently published bibliography of research relevant to social work education and training in the last twenty years, we could find no reference either to welfare rights, or to the general areas of poverty and income maintenance (Secker and Clark, 1990). Perhaps here lies the clue as to why the subject has tended to be marginal to both the training and practice of social workers.

Why then the shift in the mid-1980's, on the part of some powerful interest groups in social work, to the position that "knowledge and skills in basic welfare rights are central to good practice" and the belief that "welfare rights work must be regarded as an integral part of the mainstream social work task for all social workers, including probation officers..." (CCETSW, 1989b, pp4-5). Part of the answer lies in the extensive discussions and consultations that CCETSW carried out in the period 1981-86, which culminated in the now aborted QDSW (Qualifying Diploma in Social Work) proposals. The evidence that CCETSW gathered in the course of this enquiry revealed some glaring inadequacies in the content of social work curricula, highlighting, *inter alia*, drug, alcohol and substance abuse, gender and race issues, and welfare rights (CCETSW, 1987, p16). The CCETSW had come to the view that existing education and training arrangements could "no longer routinely equip social workers with the knowledge and skills they need to fulfil the responsibilities placed upon them" in the new legislative, social and demographic climate of the 1980's (CCETSW, 1987, p12). This view was to be reiterated by the 1989 CCETSW report, which suggested that a number of factors - extensive, long-term unemployment, constraints on publically owned housing, and changes to Social Security legislation - had combined to place increasing pressures on social workers to intervene in these aspects of their clients' lives (CCETSW, 1989b, p5).

And yet poverty, low income, and poor housing conditions have been an enduring feature of British life, certainly over the past century. Admittedly, the present conjuncture seems particularly serious, but widespread poverty and its attendant social problems are not new social phenomena, characteristic only of specific historical periods and associated with certain economic and political policies. They become more or less acute, according to the movement of political and economic priorities, but they do not go away. The human casualties may change face, the demography of poverty might alter, but the phenomenon persists. That the British social



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work establishment has only very recently decided to place it firmly on the educational agenda is both a matter of regret, as well as an initiative to be welcomed. That it should have taken so long is unfortunate, when we reflect that the very committee (Seeborn) whose report was to lead to the establishment of CCETSW in 1971, had estimated that about sixty per cent of all social services cases resulted from low income and poor housing (Bolger et al, 1981, p63). But that is now history, and we can spend our time more profitably looking at the potential that such an initiative opens up for both the training and future practice of student social workers.

### **Social work, welfare rights and computers.**

The initiative should be welcomed, for it occurs at a time when many of the technical difficulties, and questions of skill and competence, in the field of welfare rights are potentially resolvable, with the application of information technology (IT). There are already instances where software packages have been used effectively by a variety of local authority personnel to advise particular client groups on benefit entitlement, though coverage remains patchy (Alcock and Shepherd, 1987). Financial constraints on local authority budgets are not helping such innovations, although the application of IT to the general area of welfare benefits advice has, over the past five years, developed significantly, involving a number of different bodies, both private and public (Hollows, Ed., 1987).

The revolution that has occurred in IT in recent years is certainly beginning to impact on social work, as it has in many other labour intensive areas of work. The LAMSAC survey carried out in 1984 revealed a majority of social services/work departments in the UK either currently using or planning to introduce computers to their operation in the near future (LAMSAC, 1984). The potential spin-offs of that development for welfare rights work and the calculation of benefit entitlement, in the social work context, are considerable, although not entirely problem free (CCETSW, 1985). Social

work education falls into that frame.

### **CAL and social work education**

CCETSW has already acknowledged the importance of information technology to social work training (CCETSW, 1985), and there are examples of the use of CAL packages on existing courses (CCETSW, 1985, p40-47). From what we know, however, such innovations in social work education are still very much in their infancy, and are mainly confined to particular subject areas, such as law.

CAL is already an established part of educational programmes in a number of different faculties at the authors' own base, Southampton University, and is currently integrated into the teaching methods of departments as diverse as History and Electronics. Its main advantage over more traditional lecture/seminar methods is that it allows for a highly individualised learning experience, which enables students to repeatedly explore, at their own pace, areas of difficulty, and to move more quickly through areas where they have some prior knowledge and experience. It is also capable of stimulating interest, and encouraging curiosity on the students' part, in so far as it can give immediate feed-back. A potential spin off then is that it can lead to a wider knowledge of the subject area.

However, there is no program specifically designed to teach welfare rights, although there are several which enable welfare benefit entitlements to be calculated by non-experts (Rafferty et al, 1989). One solution to the problem of lack of dedicated software is to design course material which would enable existing programs to be used for learning. Developing this courseware can be equally time consuming but is generally less expensive than starting from scratch.

It is in this context that this field trial of the Maximiser Welfare Benefits package has taken place. Faced with the dilemma of adequately covering welfare rights and associated teaching from limited departmental resources, and



wishing to respond constructively to the legitimate demands of students for more teaching in this area, the authors decided, with the help of a grant from the CTI centre, and free provision and updating of Maximiser II by Ferret Information Systems, to test out the educative potential of such computer packages, with two questions uppermost in their minds. Could such packages improve student performance in the calculation of individual entitlement, and would they at the same time provide students with an opportunity to extend their knowledge of the welfare benefits system? This study then is an attempt to explore, and possibly answer those questions.

### The participants

The field trial took place towards the end of the academic year, in the summer term of 1990, when all of the students who eventually took part were free from any pressure from academic commitments, although some were about midway through their final placement. They came mainly from 2 Certificate of Qualification in Social Work (CQSW) courses, a one-year post graduate group, and a two-year non-graduate programme (first year), although we did manage to pick up a few interested stragglers from the second year of the non-graduate course on the way!

Their participation in the field-trial was entirely voluntary, although the idea had been introduced to both student groups early in the Autumn term 1989, just to test whether there was any potential interest in such a project. There was a reasonably positive response at that stage, and we were not too disappointed when 43 students eventually agreed to participate, almost 50% of the total student body at the time.

The students were randomly assigned to two groups. One, which we shall call the CAL group, worked exclusively using the computer package. The other, which we shall call the DOC group, worked primarily with the CPAG handbooks, and any other written materials to which they had access.

Before beginning the experiment each group was asked to complete a short questionnaire which showed the following:

In all 43 students took part in this exercise - 22 in the CAL group, 21 in the DOC group.

Two thirds of the students ( $n = 29$ , 67.4%) were female, one third ( $n = 13$ , 30.2%) were male. The gender distribution was the same for both groups.

Their ages ranged from 21-40+. 30% were under 30, 37% between 30 and 40, and 33% were over 40. The DOC group were generally older - nearly half were over 40.

Most students expressed some interest in the topic of welfare benefits (only 2 people said they had no interest). 51.2% said they were interested in welfare benefits as part of their work, 44.2% were interested for its own sake.

Nearly half the group, 44.2%, had received no teaching in welfare benefits. The remainder had received anything between 6 and 12 hours of teaching.

Almost three quarters had some placement experience of welfare benefit problems, and over half had some or substantial work experience prior to the course (none or very little - 44.2%, some - 46.5%, substantial - 9.3%).

Their previous experience of computers was as follows: 16.7% had none, 42.9% had very little, 40% had some or substantial experience of using computers. There were no significant differences between the two groups on these variables.

### The Field Trial

The experiment was designed to take place over one day (see Appendix A for the detailed structure), with the morning spent studying welfare benefits using case studies designed for teaching purposes (Part 1) and the afternoon session completing two tests - one involving the calculation of benefits for three case studies, the other a straightforward test of knowledge of welfare benefits, involving both direct and multiple choice questions (Part 2).

Once the preliminary questionnaire had been



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completed, each group, accompanied by one of the researchers, was given its instructions. In the case of the CAL group, each student was given access to a terminal, and the whole group was taken quickly through Maximiser, the researcher pointing out how to access the program, choose from the menu, move backwards and forwards through the program, and how to access the HELP facility, etc. Once they had familiarised themselves with its operation, the students were asked to spend the morning session working on the teaching case studies (Appendix B) at their own pace, with the researcher on hand to help out should they have any technical difficulty with the program's operation. Fortunately, Maximiser II is relatively easy to operate, so the group was soon engrossed in the exercise, tending to help, and ask questions of their immediate neighbours, rather than refer to the researcher.

DOC group spent the morning session working through the same case study material, using their own written materials and the CPAG handbooks. They also were free to choose whether to work individually or collectively.

Having completed this part of the experiment, both groups were then presented with the test case studies (Appendix C), and they were asked to complete them without collaborating. Again the CAL group had access to the computer based package, whilst DOC group had access to the handbooks and their notes only. We set no time limit on this part of the exercise. On completion of the case studies, each student was asked to complete a knowledge test (Appendix D), without reference to any written or computerised information. CAL group students were also given a questionnaire covering their views of this method of learning. A number of students in DOC group were disappointed that they were not to use the computer based package and at their request they were introduced to Maximiser after completing the tests. Those who did so were also asked to complete the final questionnaire.

## **Preparation of the material**

When we first set about thinking how we might design this field trial, our minds were very much pre-occupied with what might be described as an "issue based" approach. We wanted to explore a range of different issues, focusing on specific aspects of discrimination, such as gender, race, age, and disability, to enable students to uncover some of the problems inherent in the current benefit system, as well as giving them the opportunity to explore the range and variation of benefit entitlement. It soon became clear however that Maximiser was not set up to allow for this. Like other programs currently in operation, it is designed essentially to calculate individual entitlement, so we decided to shift our focus from one based on issues, to one which would allow students to explore the full range of benefits for what we would describe as "typical client groups". We subsequently designed five case studies focusing on young families, single parents, young people and disabled adults, and ensured that the help facility would allow students to explore the relevant entitlements for the range of benefits involved. Although the cases are fictitious, we would argue that, based on the practice experience of one of the researchers, similar client circumstances would be commonly encountered in the everyday practice of many social workers. Having identified the points we would have expected the students to learn, we then devised three test cases and a knowledge test to check whether the students had indeed learnt what we expected from working through the teaching cases.

Our expectation was that those students who had received previous teaching would produce higher scores than those who had not, despite any differences between the knowledge gained after the experimental training session. We also hypothesised that the use of a computer would have a significant impact, and that those who used Maximiser would produce better test results, though we had no particular basis for this expectation



## Results

### 1. *Test of knowledge of welfare benefit entitlements* (Appendix D).

Scores ranged from 3 to 21 out of a total possible score of 32. Using the mid point of the range of scores as the dividing point, students were designated high or low scorers. Overall the DOC group did better on this test, with 71% achieving the higher score compared with 33% of the CAL group. Female students did slightly better than male students - 57% scoring high, compared with 38% of men, but there was no difference between older and younger students.

More surprising was the effect of previous teaching: 58% of those who had received teaching on welfare benefits scored high compared with 44% of those who had received no teaching, a surprisingly small difference.

Since it was essentially a memory test it is perhaps not surprising that those students who had to work harder to obtain the information (on the assumption that searching in books is more laborious than pressing the help button!) retained more of it. However the overall scores were low, despite the test occurring immediately after students had spent the day immersed in welfare benefits exercises, which suggests that our group of students do not easily carry details of entitlements in their head. This has clear implications, not only for what we should be expecting them to learn, and how they "learn" it as students, but also how such information will be accessed when they need it in practice.

### 2. *Case studies* (Appendix C)

Again there was a range of scores for each of the cases and the midpoint of the range was taken as the cut off point for a division into high or low scorers. There were dramatic differences between the two groups in their ability to determine correctly the benefit entitlements of the individuals and families described in the case studies, as can be seen in the following table:

	Group	
	CAL	DOC
High, < 19	20	1
Low, > 19	2	20

The most marked differences were shown in the case study selected to explore students' abilities to work out entitlements for disabled individuals (George). The differences between the two groups here were very strong, with 90% of the CAL group scoring highly, compared to 9.5% of the DOC group. Previous teaching on welfare benefits had no effect on these results.

In the case study of a young family (Charlie) there was again a significant difference between the two groups - with 73% of the CAL group falling into the high scoring category compared with 14% of the DOC group. Again the amount of teaching had no separate effect on the scores.

The final case study, a single parent (Sandra) showed similar differences with the CAL group scoring higher overall: 81% of them were high scorers compared with 38% of the DOC group. The amount of welfare benefits teaching they had received had no effect on this result.

The effect of gender, age and level of interest in welfare benefits on the test case scores is negligible compared with the impact of using a computer program to determine entitlement.

### 3. *Details of specific benefits.*

We also looked in more detail at two specific benefits - income support and community charge benefit, which are covered in both the quiz and the case studies.

#### a. Income Support.

Although all the students identified Charles and his family as eligible for income support, only 24% of the DOC group were able to assess the correct amount of the entitlement compared with 91% of the CAL group. In the case of George



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all the students in the CAL group identified his eligibility for income support, compared with 48% of the DOC group. However, the CAL group clearly experienced some difficulties here for only 23% arrived at the correct amount of his entitlement.

In the test questions on income support there was very little difference between the two groups in their ability to identify those benefits which are included as income, or the capital limits for eligibility, the DOC group scoring only slightly higher. Just over half the students in each group were able to name premiums which are added to the basic income support in calculating the applicable amount, and only 1 person in the CAL group and 2 in the DOC group could quote the correct amount for these premiums. Similarly, both groups had problems with answering the questions on earnings disregards and availability for work exemptions, again the DOC group doing rather better.

The questions were designed to cover fairly basic matters about eligibility and entitlements to income support, a benefit claimed by a significant number of social work clients. Overall, therefore, it is disappointing that so few students knew this information, and raises an important question about how we can ensure it is available to them in their work with clients.

#### **b. Community Charge Benefit**

In the case study questions all but three of the students were able to identify correctly that Charles was eligible for community charge relief. However, only one (from the DOC Group) was able to identify the correct amount. In both of the other case studies, those in the CAL group were much more likely to identify eligibility, but still had difficulty in identifying the correct amount.

On the test questions, both groups of students had problems with the capital limit, with only 5 students, 4 of them from the DOC group, correctly identifying family credit as counting as income, and mobility allowance as being

ignored. There was no difference between the two groups in the errors made about severe disability allowance and invalidity benefit, with a majority in both groups wrongly assuming these benefits were not counted as income in the calculation of entitlement for community charge relief.

The DOC group did rather better in identifying categories of people who are exempt from the community charge. There appeared to be no significant effect from previous teaching, although there was a tendency for those in the DOC group, who had received previous teaching, to score slightly higher on the knowledge test.

Again, it is to be expected that many clients of social services departments would be entitled to community charge relief, or exempt from the community charge, and social workers need access to relevant information about this in their practice.

#### **Effects of Previous Teaching and Work Experience**

Previous experience of welfare benefits work had no effect on the scores in either the test cases or the knowledge test. Few students reported having substantial work experience in welfare benefits but it is nevertheless surprising that it had no effect.

Similarly surprising was the lack of effect of previous teaching. This had no effect on the students' ability to calculate entitlement. What clearly made the difference between high and low scores was using the computerised benefit package. However, using the program did not help the students to retain information about benefits, regardless of whether or not they had received previous teaching. Amongst the DOC group, more of those who had received previous teaching scored high on the knowledge test, but there was no effect from previous teaching on calculating entitlement to benefit.



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## Views about the computer based package

In general terms the students expressed mainly favourable views about using the computer based package. It certainly provoked considerable curiosity among the DOC group, many of whom readily accepted the opportunity to experiment with Maximiser at the end of the day, and completed the users' views questionnaire.

It is commonly said that social workers are not enthusiastic about computers. We explored the students' views at the beginning of the day by asking them to select words that best described their reaction to working on a computer.

Twenty three students expressed interest or positive feelings about this approach, 13 expressed fear, incomprehension, or generally negative feelings, while the remainder had mixed feelings or no particular feelings about using a computer.

Some already had computer experience, whilst only 7 recorded no previous experience. However, the largest group, 18 students, recorded having very little experience, while 14 had some experience, and 3 students recorded substantial previous experience with computers.

At the end of the day, of the 33 students who completed the final questionnaire (22 from the CAL group and 11 from the DOC group) most, 26, reported finding using the computer interesting; four described it as fun, and only 2 reported the experience as boring.

Their views about the program itself were varied: most found it fairly easy to use, and described the layout as attractive or friendly, and 90% found the HELP facility fairly easy or very easy to use.

However, making sense of the information available was less easy. We asked specific questions about the information available on income support, family credit, eligible rent, community charge exemptions and attendance allowance - all of which they should have

needed to explore while working through the first batch of test case material. In the case of family credit and attendance allowance most students felt the information had been clear or helpful, and in both cases only 7 students reported it as being confusing or inadequate. However the reverse was true for community charge exemption, income support, and eligible rent where half the students reported the information as being confusing or inadequate.

We also invited those who had used the computer package to add any other comments they might have about the program. 20 responded, 13 from CAL and 7 from DOC. Interestingly, the comments from CAL group were significantly more negative, with comments such as:

Not particularly user friendly, prefer...

Using ESC to turn pages is confusing when you have used other packages...

Very frustrating when it would not go back page by page...

Very confusing without some more guidance notes...

By contrast, those who had spent the day laboriously working through Benefit Handbooks, were infinitely more positive:

When you get used to the system would be an invaluable time saver.

Better than...much more user friendly and helpful.

Much quicker than working out with the Handbook, and hopefully more accurate!

## Discussion

Our hypothesis at the beginning of this project was that those students who had both undertaken a course in welfare benefits and had the training session with Maximiser would score noticeably higher than the other groups on both the knowledge test and the test cases. Our results clearly do not support this. The significant factor



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in enabling our students to identify and calculate entitlement to benefits was the use of the computer program and previous teaching was insignificant in helping them to do this. However using the program did not help students to retain specific items of knowledge about the benefit system. If anything the combination of previous teaching and exercises using the handbook was marginally more effective in enabling students to remember information about entitlements. However, the effect was small and because of the design of the study, the students were only asked to retain the information for a few hours.

In practice, social workers need access to accurate information on welfare benefits, at irregular intervals. Since the information itself is complex and continually changing, the human memory is not a suitable repository for it. However, a computer based package is, and it is very clear from this study that social work students can learn to use such a package quickly, easily and effectively to determine a client's entitlement to benefit. This method of working had a clear advantage over using the handbooks in both identifying and calculating entitlement to benefit. However, in order to translate this ability into everyday professional practice, social workers would need easy access to the computer package, and it would be necessary for agencies and social workers to accept that it is a necessary practice tool. If this ideal situation developed, it would be an important part of professional training to ensure that social work students could use a welfare benefit package effectively and accurately.

In contrast to expectations about social workers' reluctance to use computers, the social work students who took part in this exercise were very positive about the experience and found it interesting and easy to use, despite the fact that almost half had some misgivings about this way of working before they started.

They did experience some difficulties in obtaining information from the program, and it may be that more detail should have been included in the case studies to enable them to

use the help facility more effectively, or, that the information screens, particularly about eligible rent, community charge exemptions and income support, need adapting for beginners.

Experiments of this nature, are of course limited. We taught and tested students over a very short period of time, and although this probably strengthens the findings about the amount of knowledge gained and recalled by the students, it leaves unanswered questions about the effectiveness of using the package over a longer period of time and at irregular intervals. Since, to our knowledge, there have been no similar studies, the findings appear sufficiently encouraging to warrant further development and evaluation.

## Conclusions

Although our study was designed to explore the usefulness of a computer based package in teaching welfare rights to social work students, our strongest finding is the importance of such a facility as a regular part of social work practice.

The significant points for social work training are:

- 1 That it is important to introduce social work students to computer based welfare benefits as a preparation for practice.
- 2 Students found working through case material using the package to be interesting and in some cases fun.
- 3 The client group model of welfare benefits teaching appears to be the most appropriate basis for developing computer assisted learning material.
- 4 There is scope for developing this approach as a learning package, by devising more and better case material, by revision of the help facility, and by incorporating scoring and correction procedures into a teaching sequence.



## Appendices:

### Appendix A - Preparation document for students in the CAL group.

#### MAXIMISER II by FERRET

The Department of Social Work Studies has been helped by Ferret Information Systems, the company formed by workers previously employed by the National Association of Citizens' Advice Bureaux, to conduct a field trial of their welfare benefits program, **MAXIMISER II**, using social work students as the "guinea pigs". The trial will be conducted in two parts.

##### Part 1

This part contains five case studies which have been designed to cover a wide range of welfare benefits issues. Using the computer program, Maximiser II, you are asked to work through each case making extensive use of the extra information available through the **HELP** screen.

The purpose of this part of the exercise is to familiarise the participants in the use of the computer program in the calculation of welfare benefits, as well as to test out the program's impact as an educational aid.

We want you to work at your own pace in this part, exploring those issues which most interest you. We would encourage you to discuss your experience of using the program with the other participants.

##### Part 2

Once you have finished Part 1 we will ask you to complete:

- 1 A short questionnaire giving us your views of learning by computer.
- 2 Three case studies designed to evaluate the accuracy of your use of the program.
- 3 A brief quiz to establish what you have learned about welfare benefits from using the program.

We are most grateful for your participation in this evaluative project.

### Appendix B - Teaching Case Studies.

1. Winston is now aged 17 years and 6 months. He has spent most of his adolescence in care and is still in care, having had no contact with his parents for the last five years. He attends a YTS scheme at present, working 37 hours per week, but this ends in two months time. He

is in his second year of YTS and therefore receives the higher rate of £35 per week. He is living in lodgings arranged for him by his social worker, for which the charge is £50 per week, which covers rent, and all services, together with breakfast and an evening meal. He has no other source of income, nor does he have any savings. The Community Charge for the area in which he lives is £320 per year.

What benefits is Winston entitled to?

What will his position be when his YTS placement ends, if he cannot obtain work?

2. Ranjiv (age 27), and Indu (age 24) are a married couple with two children, a daughter, Parvin aged 2, and a son Salman, aged 5, who suffered severe brain damage at birth. Salman is unable to walk, cannot attend school, and requires constant attention. Indu is expecting their third child in three months time. They live in their own house, bought several years ago, and the outstanding amount of their mortgage is £30,000, on which they pay 15% interest. The Community Charge for their area is £320.

Ranjiv has been dismissed from his job following a row over timekeeping. He is appealing for unfair dismissal, and is also looking for work. He is therefore not eligible for unemployment benefit.

What benefits are the family entitled to?

3. Sally is a 32 year old woman with two children, Damian aged 10 and Carrie, aged 4. All the family are in good health. Damian is at school, and Carrie attends nursery school two days a week. Sally is divorced from her husband, who pays maintenance of £10 per week for each child. She has a regular boyfriend, Nick, who frequently stays in her flat, but who does not contribute to the household expenses on a regular basis.

Sally and the children live in a rented Council flat, paying £28.60 a week rent, which does not include any service charges. Sally works as a cleaner for 2 days a week (15 hours in all), earning £2 per hour. She is also a registered child minder, and does 8 hours a week childminding, earning £24 per week. The Community Charge for her area is £350 per year.

Calculate her entitlement to all benefits.

Sally is offered the chance to do an additional 5 hours per week cleaning, but she is worried about the effect this will have on her benefits. Calculate her entitlement if she extends her working hours.

4. Norman is a 32 year old man with an eleven year



history of psychiatric illness, which has required lengthy periods of in-patient treatment. He is currently discharged from hospital, and lives in a bed-sit for which he pays £40 per week, which includes heating, hot water, lighting and cooking facilities. He attends an industrial therapy unit on four days a week for which he is paid £15 per week. He has worked for only short periods since his illness began, but has paid sufficient NI contributions to have an entitlement to sickness benefit during his last period of in-patient care. He therefore receives invalidity benefit of £56.90 per week. The Community Charge for his area is £350 per year.

What other benefits should Norman claim?

5. Jenny, aged 42, has two children, a girl aged 12 and a boy aged 10. She separated from her husband five years ago, because of his violent behaviour, and went to live with her mother, who was then 74. Up until last month, she had regularly received maintenance from her ex-husband, under an informal agreement made with him at the time of their separation. The current level of maintenance is £400 per month. The children's father had visited them regularly each week, but for the past four weeks there has been no word from him. To make matters worse, the maintenance payments have not been lodged in her bank account for the same period, and so, apart from savings of £1500, held in a local building society, Jenny has no other means of support.

Jenny's mother, now aged 79, had a stroke some two years ago, and since then has been bedridden. She is partially paralysed down one side. Since that time, Jenny has been her full time carer, and had not until now, asked for any assistance either physical or financial, in relation to her mother's care.

Jenny, mother, and children, live in a large, 3 bedroomed ground floor flat, previously rented by her mother, who has lived there for the past 35 years. When Jenny and the children moved in Jenny took over the tenancy. The landlord, who lives in the flat upstairs, is an old friend of the family. Jenny pays rent of £200 per month. There are no charges included in this. The Community Charge for the area is £320 per year.

Calculate Jenny's entitlement to benefit under her present circumstances.

If maintenance is restored what benefits is she still entitled to?

Calculate Jenny's mother's entitlement to benefit, assuming that she has no savings, and that her only income is her retirement pension of £43.60.

## Appendix C - Test Case Studies.

Please work out the following test case studies as far as you can, using either the computer program, or whatever guides you find most useful. **Please do not consult with other participants.**

There is no set time to complete them. For all the cases you may assume that the clients are resident in this country, and have no other commitments, income or savings apart from those mentioned in the case material. The aim of this part of the project is to discover how useful the computer program is in enabling social workers to help clients with their welfare benefits enquiries. The test cases are to test this - not you!

**THANK YOU** for helping us with this project.

Test case 1:

Charlie, aged 19, lives with his wife Tracy, and their one year old baby son, Jason, in bed and breakfast accommodation. Tracy is expecting their second child in 4 months time. They pay £60 per week, which includes breakfast, and all fuel and lighting costs. No cleaning or laundry services are provided. The Community Charge for their area is £350 per year. Charlie was working in a local factory but was made redundant last week. He has not worked for long enough to be entitled either to unemployment benefit or a redundancy payment.

What benefits should this family receive?

Test case 2:

George, now 75, lives with his wife Elsie, aged 70, in a Council flat, paying £30 per week rent. He receives only the State retirement pension for a married couple of £75.10. Elsie has no income of her own. George is disabled following a stroke 6 months ago, and Elsie now has to assist him with washing, dressing, and using the lavatory. She is still in good physical health, but is finding it a strain caring for George on their limited income.

What other benefits should they be claiming?

Test case 3:

Sandra, aged 33, is a single parent with a 5 year old daughter. She lives in a Council flat, paying £25 per week rent, which does not include any heating or other service charges. The Community Charge for her area is £315 per year. She works for 30 hours a week, earning £55 per week.

Calculate her entitlement to all benefits.



## Appendix D

### Post experiment quiz:

[Please answer these 10 questions without reference to any source of information/knowledge other than your own knowledge/memory]

1. What are the minimum number of hours a person must work before claiming Family Credit?

2. Which of the following benefits count as income in assessing entitlement to Income Support?

- |                             |                          |        |
|-----------------------------|--------------------------|--------|
| Child Benefit               | <input type="checkbox"/> |        |
| Severe Disability Allowance | <input type="checkbox"/> | Please |
| Mobility Allowance          | <input type="checkbox"/> | tick   |
| Invalidity Benefit          | <input type="checkbox"/> |        |

3. What level of capital/savings excludes an individual from claiming:

- a) Income Support
- b) Community Charge Relief

4. In addition to the basic amounts for each adult and child, the applicable amount for Income Support includes additional premiums. Give the name and amount of at least two of those premiums.

5. Which of the following count as income in calculating Housing Benefit?

- |                     |                          |        |
|---------------------|--------------------------|--------|
| Child Benefit       | <input type="checkbox"/> |        |
| Family Credit       | <input type="checkbox"/> | Please |
| Interest on savings | <input type="checkbox"/> | tick   |

6. Which of the following count as income in calculating Community Charge relief?

- |                             |                          |        |
|-----------------------------|--------------------------|--------|
| Family Credit               | <input type="checkbox"/> |        |
| Mobility Allowance          | <input type="checkbox"/> | Please |
| Severe Disability Allowance | <input type="checkbox"/> | tick   |
| Invalidity Benefit          | <input type="checkbox"/> |        |

7. Which categories of people are exempt from the Community Charge?

8. What are the criteria for eligibility for Mobility Allowance?

9. What earnings can be disregarded when calculating Income Support for:

- a) a single parent whose only work is childminding

- b) a 69 yr old pensioner doing part-time gardening

10. What are the exemptions to the requirement to be "available for work" for Income Support claimants?

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## Welfare Benefits Packages Update

*Jackie Rafferty*

### Introduction

Over a year ago *New Technology in the Human Services* published a review of three welfare benefits packages (Volume 4 No 4). The three programs described were Ferret's Maximiser II, Lisson Grove Welfare Benefits Program and Welfare Benefits Adviser from ICL. They are advisory welfare benefits calculation programs which collect information about an individual or family with a potential entitlement to benefit, do the appropriate calculations and present reports of probable benefits. We take the opportunity here to update the review in line with developments in the programs.

Since the review there have been a large number of small legislative changes in state benefits. Phil Boyd of Ferret describes them as "a lot of tinkering with the benefits system which has meant many small adjustments to the program but which has had a major impact on certain groups in society". We do not report them all here in detail in this review as our focus is on the use of the software rather than the intricacies of the benefits systems that face welfare rights advisers day in and day out. But Ferret have had to update Maximiser II 8 times between October 1990, and May 1991. The biggest impact has been on two specific groups, the young with the withdrawing of benefits for 16/17 year olds and people who are elderly with the withdrawal of housing benefits from residents in residential care and nursing homes. The birth and demise of the Community Charge has also made life interesting for the software developers who worked hard to include it within their calculations, had to make changes to how rebate was calculated, and now have to start all over again with the new Council Tax.

So life has not been easy, and we continue to be impressed by the speed and thoroughness with which the programs are updated and distributed. Both Lisson Grove and Ferret provide exemplar models of small committed units developing software for the human services and taking on the role of participating in networks of advice givers to comment and campaign on the effects of legislative change on their constituents.

### Use of the programs by the CTI Centre for Human Services.

The CTI Centre for Human Services has used all three programs at various workshops and conferences on computers in social work

education and has been able to observe the response of the workshop participants, which have been positive. Different people like different programs, some preferred the one question one screen approach of Lisson Grove, while others preferred the multiple question



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approach of the other two programs. None of the programs were designed to be used in this context and it therefore hardly constitutes a representative sample of normal users.

It is important to say that two of the programs target trained advice givers as users and therefore should not be compared to the third, Welfare Benefits Adviser, as this was developed for use by inexperienced advice givers. The workshops did throw up some technical difficulties when attempting to install a range of programs on up to 20 computers. Welfare Benefits Adviser, which was developed to be packaged with ICL office systems, has the capacity to eat up memory which meant that every time we tried to install it for a one day workshop on networked computers in a University computer room we failed, as the PC could not cope with both WBA and the network at the same time. We now use it when we are confident that the PC's are stand alone machines. Maximiser II had us phased for a while as the distribution system means that the updates disks need to be installed over the original program disks, which of course were not on the computers used for the workshops. Ferret fixed this for us by providing a special edition of the program which would allow us to install the program speedily and take it off again after the workshop equally speedily. Lisson Grove gets the prize in this section as the fastest most trouble free to install.

### **Lisson Grove Welfare Benefits Program.**

Lisson Grove continues to be improved technically and updated regularly and efficiently. The program has been ported to a new compiler and substantial sections have been rewritten to give improved general performance, especially on slower machines. This improvement is very noticeable when undertaking searches and recalculations. Lisson Grove's ability to recalculate on the basis of changing the inputs, without having to start all over again, is a very positive advantage. The program now runs in colour if you select that option and an on-line guide to the program has been expanded, with

hints and tips on using it. The Help system has been reorganised and significantly expanded. The F2 key leads you to a revised series of menus giving general access to the Help system and leads to a problem oriented general introduction to the benefits system, including case studies, which author Tim Blackwell hopes will be useful for training. It also gives advice on the best use of the program as well as instructions on operation.

There are further developments in the pipeline with the authors currently experimenting with pop up versions of the help system and the possibility of inserting local information into them. The intention is that the pop up system can be consulted whilst running other programs. Longer term developments under discussion include the viability of running the program on other computers such as Unix and Macintosh and the possibility of producing output summaries of entitlement in other languages,

New arrangements for using the program are under way, with Lisson Grove asking users to complete licence agreements. From October 1991 they will be making a charge of £60.00 + VAT per computer per year, which will cover all releases in the year. Users with more than one computer or running the program on a network are asked to contact Lisson Grove for pricing details.

### **Ferret's Maximiser II.**

Ferret Information Systems Maximiser II program has also seen some changes. The conventions for using the program have been simplified and the program is now available in colour. A NEWS facility has been added which can be accessed from the help menu or directly from the C: prompt. News allows you to look at all the new features both in the program and in social security legislation. For instance the last update included the news that the program now gave information for blind and partially sighted people and also included a Benefits and Immigration section for people who have come from abroad or wish to marry or sponsor



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someone coming from overseas. A whole range of changes to benefits are notified alongside information on campaigns and legal action under way by various benefit groups and individuals. For example it gives you news of the sex discrimination in pension legislation cases which have been to the Court of Appeal and are now with the House of Lords. Like Lisson Grove, Maximiser's Help program has been expanded considerably.

New from Ferret is Maximiser Plus, their suite of Maximiser II, in-Work Helper and Helper PC Plus loaded onto a Psion MC600, which is an A4 Notebook IBM compatible computer which weighs 4.5lbs and is less than 2" thick. This will be an invaluable aid to advice givers who can afford its price tag of £1650. It could play a large role in bridging the gap between office based advice giving on stand alone systems and the Psion Organiser hand held computer. The Organiser, whilst efficient at calculating in work and a less comprehensive version of Maximiser's welfare benefits, requires a certain amount of familiarity with its abbreviated vocabulary and alphabetical keyboard. It is also less consumer friendly because of its 2 line, 16 character screen. In a conversation with Gareth Morgan who is responsible for the development of the Psion Organiser datapaks, he told us about a voice module which is now available for the Psion, and we were theorising about how that could open up the possibility of spoken outputs in different languages, escaping the tyranny of keyboard character sets.

The information above has been gleaned from the written documentation distributed by Ferret and Lisson Grove and also from conversations with the developers of the programs.

### **ICL'S Welfare Benefits Adviser.**

The sparseness of the following update reflects the less frequent communication with the developers of the third program, ICL's Welfare Benefits Adviser. In the time that Ferret produced 8 updates to Maximiser we received two from ICL, and we have also had problems

in contacting them. They of course have been through a major reorganisation since their takeover and we did think for a time that they may have stopped developing Welfare Benefits Adviser. We are now back in contact and have been assured that the silence was more to do with our rather unique position, and therefore not being in the usual customer database and not subjected to the normal customer processes. Welfare Benefits Adviser is alive and kicking with the last update being released for the April 1991 benefit changes.

In line with the other two programs WBA now includes Community Charge benefit and advice on the Social Fund. WBA has an overlay for three of the function keys. In our original review we criticised the lack of on-screen explanation of these keys and that has been provided in the latest version. The F1 key calls the Help facility, which has been re-vamped and expanded. F2 gives information on why a question is being asked, and F3 explains the question in more detail, including any words or phrases which are capable of different interpretations.

The question screens have been re-ordered to eliminate unnecessary questioning and the developers have also managed to eliminate the blank screens that showed when the computer was "thinking" about what to do next. A new manual has been provided with the latest version and ICL have taken advice from the Department of Social Security and also now include information on DSS leaflets.

Future developments may include putting WBA over Windows rather than MSDOS, though this may not help the problem of WBA in using up large amounts of memory.

### **Conclusion.**

Continued demonstration and use of the above programs have convinced us there isn't a "best program", but each one is best suited to different contexts and usage.



Ferret and Lisson Grove have to be singled out for their continued development of the products and commitment to the subject area. Each of these two provides excellent support and help lines. The study carried out in the Social Work Studies Department of Southampton University, comparing teaching welfare benefits to social work students using written material or using Maximiser came down heavily on the side of computer assisted learning, and is written up elsewhere in this Journal. To build on this work the CTI Centre for Human Services, in conjunction with the researchers involved in the study, are now in the process of building a computerised curriculum module. We are in negotiation with both Ferret and Lisson Grove to link the module to their programs.

Details of all the programs can be found in Vol 5 No 2 of the *New Technology in the Human Services*, which is the Centre's Software Directory. Contact us if you would like a copy of the Directory. For more detailed information please contact:

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## CUSSNet and PIP

Earlier this year we received a letter from Dick Schoech querying the necessity of having two US publications - the CUSSNet Newsletter and the journal *Computers in Human Services* (Dick is Editor of both). His plan is to merge the publications by incorporating some of the CUSSNet material, such as information on software, conferences and publications, into each issue of the journal. No change has been implemented yet, and an issue of the newsletter containing abstracts was given to all those attending HUSITA2. We will keep readers in touch.

This year also saw the final issue of Programs in Practice (PIP), the newsletter produced from Sheffield by David Phillips. His final editorial passed to *New Technology in the Human Services* the task of keeping up PIP's unique contribution, which above all has been to highlight software for use in social work practice, either directly by clients, or as part of client/worker interactions. We will do our best!



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## ***Human Services Computing by Dick Schoech***

*Reviewed by David Colombi*

In this journal (Vol.4 No.4) David Phillips recently wrote of the need for "An elementary introductory text on the area of IT in the Human Services". This 600 page book does not qualify as "elementary" but, in the author's words, sets out "to provide human service professionals with a basic framework for moving into the information age. It synthesises available information in the field of computer analysis, information management and communication within the context of the human service environment."

Dick Schoech is an Associate Professor at the University of Texas at Arlington but is perhaps best known as the founder of CUSSNet (Computer Use in the Social Service Network) and Editor of *Computers in Human Services*. The task that he has set himself is an ambitious one, so the question is how well does he measure up to it? The short answer is that he has produced a book which although not without flaws is astonishingly wide ranging and informed in its coverage both of computing and of its applications in the human services. It shows an enthusiasm for explaining computing in a clear, lively and relevant fashion and combined with continuing use of specific examples to illustrate themes and issues. The result is a comprehensive and stimulating book that makes a major contribution not just for the new user but for all of us in the social services who need to widen our knowledge of computing.

For Dick Schoech it is critical that Human Service computing is not left to the computing specialists, and he sees both professions as having difficulties understanding each other but with common threads - "Both are highly specialist, complex, laden with jargon and require experience to understand the subtleties of practice. Both have credibility problems. Both fields frequently overpromise what their services can accomplish. Good intentions often fail to produce results, even with long, hard, and frustrating work". Quite so!

The book is divided into three parts covering:

- \* the human services environment and decision making
- \* the technology
- \* applications and issues

### **The human services environment**

Part 1 starts with what computing can mean to

people involved with it. Most remarkable is Linda, who through cerebral palsy can only move her foot. Yet by being linked to the right technology she not only works as a computer programmer but is involved on research projects in voice synthesis and control of computers by brain waves. For Linda computing not only means greater freedom and independence but also being visited as a professional colleague rather than as a disabled person - an interesting reversal of the notion of computers isolating people. I found myself thinking about Linda a lot at the time of the Gulf war with its daily reminders of the awesome destructive power of high technology.

Of wider relevance, computing is explored from the point of view of an executive secretary, a therapist in a mental health centre, an information director in a state welfare department, an executive director in a health agency and for a member of a fund raising agency. Whilst many uses were in the mainstream realms of word processing, graphics, accounting and patient/client information



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systems, the therapist must have had access to funds and used videodisc systems for training, client education and keeping in touch with research. However there is a firm focus on meeting real needs of people in real situations and showing the frustrations as well as the achievements.

From these personal experiences, Dick Schoech moves on to consider basic computing concepts in Human Service situations, setting these in a historical and political context. The definitions include the notions of *hard* and *soft* technologies with human services as a "soft technology" which the author assumes to be "susceptible to definition, measurement and control" rather than an art or an ideology. In this section and throughout the book extensive use is made of diagrams and of analogies, particularly an on-going analogy with transport systems, to clarify computing terms and systems. Many of the analogies are thorough and helpful and the chief disappointment is the relatively poor quality of the print so that diagrams and photographs lose their impact.

The historical context includes homage to Charles Babbage's *difference engine* and to Ada Augusta as the first programmer, although somewhat unromantically failing to note that she was Byron's daughter. Sadly, scant regard is paid to later European influences such as the work of Conrad Zeus in Germany or on the Colossus computer in Britain. More seriously, the author tends to underplay the role of military applications and demands in the development and use of computers. There is attention to the historical and social impact of information within societies with parallels drawn between arguments used in ancient Greece about the effect of writing on oral traditions and the changes implicit in an information society. The section on the notion of an *information society* is tantalisingly short.

Substantial attention is paid to systems theory in relation both to computers and to human services, and it is through this that the role of computing shifts beyond information gathering

and analysis into the critical area of decision making which in the author's words "is a core process in all human service activities." This analysis then provides the framework for a wide ranging analysis of human service information needs. This not only highlights the extent to which services are middle management rather than practitioner led, but also the extent to which the problems are about computing specialists needing to understand the functioning of human services, as well as all levels of human service workers being involved in developing use of computers.

At this point it is worth referring back to his dedication of the book "to the human service workers who are at the bottom of the organisation. Typically they have the most complex job, receive the least guidance, risk the most, yet receive the least rewards. It is time they received the support that computing can provide."

### **The Technology**

Part 2 is a comprehensive guide to the hardware and software involved, which is best used selectively by those who don't want or need to go into detail about how computers work, how disks organise information or about writing computer programs, although the diagrams are helpful for those who do. The chapter on Software is of wider application, and the chapter on Data Management is a critical one for anyone who wants any real understanding of the significance of computing in services which are "drowning in information but starved of knowledge."

### **Applications and Issues**

For most readers, Part 3 will be the most important, exploring applications of computing in the Human Services and the issues involved. Applications are explored at the different levels of policy/planning, agency management, direct service, education and training and client level and are analysed in the progression from:



- data systems to
  - information systems to
    - knowledge systems to
      - decision support systems.

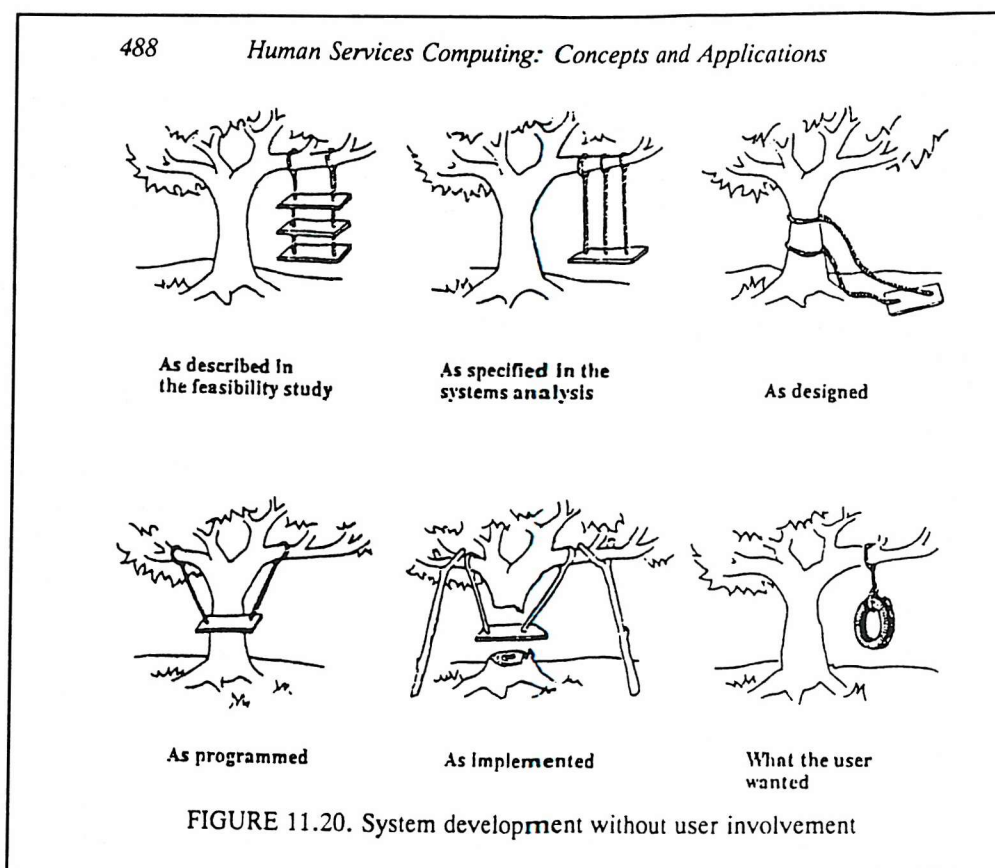
These applications, with a rich variety of specific examples, includes client information systems, assessment programs, training, counselling, monitoring, expert systems, decision support and modelling systems, hypertext and sensory, communication and augmentation aids. They are all areas where a start, but only a start, is being made into developing applications and there is exploration of the problems and difficulties in development in areas characterised by an imprecise knowledge base.

Examples of expert systems are taken from psychiatry in the treatment of depression and from child abuse particularly in the realm of modelling systems and decision support. These indicate not only how much there is still to do but show all too clearly cultural differences in the approaches to these issues. The point is made that computers are never value free.

A consistent theme is the need for computing to complement and support rather than to replace professional practice. This is despite the accumulating evidence of computers often providing a more thorough, tolerant and sensitive form of help which clients like and find helpful, particularly for very personal areas such as sexuality. These are set against areas such as caring, creativity, complex phenomena and

ideas, self reflection, spontaneity, laughter, values and non-verbal communication as areas where people can excel.

For all his enthusiasm for developing computing applications Dick Schoech retains a clear awareness of the limitations of computers and difficulties of implementing them into practice, not least in the area of professionals' attitudes to the computer. Reference to legal action by a client against a therapist for not using a computer gave pause for thought.



Problems about development and implementation are examined in detail and this section has much to offer to those who plan systems, and warnings for those who don't start with the needs of the end users, those who don't consult and train, those who are into pioneering, and those who expect software to arrive on time !

The final section examines trends and issues for the future, highlighting the way hardware development has and continues to outstrip software



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development, and the abilities of the professions to respond to change. It covers issues of empowerment, verification, information ownership, software liability, job displacement, computer dependency, education and training. It regrets the preoccupation of most computing talent with commerce and exploitation of the technology.

*Human Services Computing* ends with the view that the "Infrastructure of the information age is being built and that human services professionals must develop the human service components of this ... central to the future is having the vision to avoid potential problems, such as privacy violations and dehumanising systems." This book

sets out not as a vehicle for new ideas, but to synthesise what is available. As such it succeeds admirably and is a notable and worthy part of that vision.

*David Colombi is Research and Information Officer, West Sussex Probation Service.*

*Human Services Computing* by R.J.Schoech is published by Haworth Press, New York, 1990. The price in Britain is £57.95 for the hardback version, and £22.50 for the paperback. It is available through UK bookshops.

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## Computer Use in Social Work in Denmark

*Soren Larsen, Morten Lindstrom and Lone Verner Nielsen*

### Introduction.

The following describes the more significant results of the EDP (electronic data processing) project at the Social High School in Aarhus, Denmark. The project was financed by the Ministry of Industrial Affairs and the Ministry of Social Affairs in Denmark, and the task was to study "New fields of application of information technology in social work". The project took place from November 1988 till May 1990, and was a co-operation between the trade union of social workers in Denmark (Dansk Socialrådgiverforening), and the Social High School which trains social workers. Three employees were attached to the project, namely one computer scientist and two social workers.

### Computers in social work in Denmark.

Up to the present municipal social administration in Denmark has used computers primarily for client data recording and for the calculation of social aid. On the whole the programs were developed exclusively by the municipalities' own company, Municipal Data (KOMMUNEDATA), and were run on the big central computers of this company. The terminals were operated by secretaries, and until recently the attitude of social workers towards using EDP has been rather unsympathetic. It was regarded as a technique, as a writing utensil which had little to do with social work. The effect of this situation

has tended to be that tailor-made programs, developed on the basis of a needs analysis at the individual working places and in collaboration with the users, have been unknown phenomena. However, in the last few years there have been indications of a breach in this not very flexible pattern. Because of competition and widespread discontent with Municipal Data, private companies have entered the market. Together with social workers some of the companies have developed expert systems, which give quick answers when the social worker is in doubt about, for example, legislation or the internal directives given by the ruling administration. Some systems are even able to give answers to



concrete applications from clients. The computer is on its way to the social worker's desk.

Naturally, this development brings up a number of professional and ethical questions:

What are the limits to using EDP in social work?

Are the clients to "watch TV" with the social worker?

How do we secure the best user influence on program development? (If programs are developed solely by isolated technicians with no knowledge of social work, the chances are that they will not be used).

How do we secure a reasonable measure of user friendliness in the programs in order to enable the clients to use them in a process of self administration?

How do we choose the right computers and programs appropriate for social work?

How do we see through the more or less hidden built-in values of the expert systems which are the basis for the decisions which the system makes?

### The need for tools of analysis.

If social workers (and clients) are to have influence on program development it is of utmost importance that they have analytical tools which give them the necessary capability to argue at a well informed level. Failing that, there is a great risk that computers and programs are merely placed on desks where the social worker can use them more or less robot-like.

We have drawn up a way of thinking which divides the computer programs into types on an objective/subjective scale.

### OBJECTIVE < ----- > SUBJECTIVE

text  
calculation

therapy  
diagnosis

The subjective programs, eg. therapy and diagnosis programs, contain the more "built-in" human judgements, whereas the objective ones, eg. spreadsheets and word processing, at the opposite end of the scale, contain fewer judgmental components. Additionally, the judgements may be more or less invisible to the user. Some system designers have supplied the programs with a built-in possibility for the user to enter the program and scan the basic design, while others have been completely indifferent about this. An example of the latter comes from a vocational guidance program through which Danish pupils are asked to mention their needs for future education and work, eg. if they wish to leave town to receive education. After about 20 questions the program will often conclude that there are no educational facilities, based on the answers, but it is quite unclear how each single question influences this overall conclusion. In social work it is often a question of making decisions with far reaching consequences for the individual.

If computer programs are taken into use for such purposes, then it would be reasonable to demand that the constructor's value framework can be checked by the individual user.

In general the objective/subjective way of thinking can help you assess when to be critical and questioning, and when you should not spend much time analysing. We find the "objective" part of programs without problems, whereas there might be a problem in the "subjective" end of the scale. The first and most important question, when working with a knowledge based program, is to find out whether the author of the program has the same human values as oneself. This one can assess whilst using the program, and often you will add or deduct to make the "results" match your own attitude.



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## Two computer programs developed with user participation.

In our project we have spent a lot of time working directly with users (social workers and citizens) in the program development. We find that such user participation is an absolute necessity if the programs are to be serviceable and accepted, and therefore used by social workers. As an experiment we developed two computer programs jointly with the users:

1. One program was named the **ILLUMINATED PANEL**, intended for all inhabitants in a local area at the centre of Denmark's second largest city, Aarhus (population 250,000).
2. An **AGREEMENT PROGRAM** intended for assessment or review interviews between social worker and client.

Both programs were made through prototype development which can be briefly illustrated, chronologically, as below:

Needs of computer program ->  
Construction of program ->  
Test and evaluation ->

After following the 3 stages you start over again, until satisfied that the program can be left to run in real life. This sounds simple but can be a fraught process, as we know from experience.

### The ILLUMINATED PANEL.

In the light of strongly rising public expenditure in Denmark, attempts are being made to give added weight to the idea of public self administration. This has resulted in a growing number of social workers engaged in community work in little local centres, ie. places to enable the activities of inhabitants' associations and the administration's attempt to integrate vulnerable persons into the social life of the local community. In this context the **ILLUMINATED PANEL** can be used. The program is run on an ordinary 20MB PC which is placed at the free

disposal of the local community centre, which is likely to be a small shop in the City of Aarhus, with access direct from the street. All inhabitants in the district can read or write any information, eg. about:

associations,  
counselling,  
education,  
baby sitting,  
second hand buying and selling,  
vacant housing,  
theatre,  
training, etc.

There is a special part for the children, and it is possible to place contact advertisements, partly to find a partner and partly to get in touch with people in order to start up new activities in the local community. The menu of the **ILLUMINATED PANEL** came about as a result of close development co-operation with three inhabitants, and on the basis of the centre staff's experiences with needs in the area. In the development we have made a point of obtaining an extremely high degree of user friendliness. Our point is - if existing EDP systems are not changed into being much more simple, a great part of the population, especially the weaker individuals, will become illiterates in the future Information Society. Thus there would be a large part of the population needing help just to get access to the information system. This is important since prosperity in our terms relates closely to the impact you can have on your own situation. You cannot make your own life decisions if you have no access to vital information about yourself.

**How was the program used?** After 4 months we evaluated the inhabitants' use of and attitude towards the **ILLUMINATED PANEL**. It seems that our objective of user friendliness has been attained. In short, the results sum up as follows:

The program was used frequently.

The program can be used by a great number of the inhabitants due to its high user friendliness.



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A great number of the inhabitants want to use the program and many found that the idea of the program was good.

Primarily, the users came from the local community.

Several people expressed a wish to have a number of interconnected computers in the local community.

In several cases the users found the ILLUMINATED PANEL more useful than the alternatives up till now.

Some users emphasise the program as being more environmentally acceptable than the alternatives.

No users feared data recording.

Help in using the program is needed for a smaller group of users.

The users were satisfied with the help they received from the staff at the centre "BYKERNEN", where the program was lodged.

Some users (many of them pensioners, the weak-sighted, the blind, opponents of EDP, the people who want information at home) cannot or will not use the program.

Some of the potential users are afraid of an alienating element in EDP.

Publicity and a preparation period are required before such a program is installed.

There has been no misuse of the program.

The program has been very reliable.

**Our research.** Our research, from which these conclusions are drawn, was primarily based on:

1. Interviews with 33 users of the program and 26 inhabitants of the local area who had not been using the program. Both

groups were a random sample of the users or inhabitants.

2. The staff of the community centre were interviewed about their observations (staff being in the frontline in relation to the users).
3. We made our own observations while the users handled the program.
4. An analysis of the "advertisements" in the program in relation to type and number. We also looked at the users' comments in the program (before exiting people were asked if they would like to comment on the program).

We will now look at some of the results in more detail.

*User frequency.* In the test period's first 67 days 318 advertisements was placed by users. 350 inhabitants just looked. Multiplied to a one year scale, it means an average of 50% of the inhabitants in the local area will press the buttons once, which is a fairly impressive number for a new media.

*Who used the program?* The typical user was a person between 16 and 34 years of age with 12-13 years at school and some knowledge of computers, mostly students (university) or unemployed. Looking at the difference of user frequency between genders, we find slightly more women. In this area computers are not just a man's world. We cannot conclude that it is only people with some education and knowledge of computers who will use public computers. We found people using the computer if they had a specific need for information (eg. free rooms or apartments to be let). This part of the city has many students and mostly old and therefore cheap apartments. Many students rent the first they can find, and then spend a great deal of time finding a more acceptable living place. 50% of the adverts were from people who wanted to rent or let out accommodation. Two of the more unusual adverts were written by single



males in their 80s, who were looking for new partners.

*What sort of adverts were entered?* The inhabitants and staff who took part in developing the program had suggested 16 different categories of adverts. It was interesting to see whether this would meet the needs of the users. During the test period only one further category was suggested (Job application aid). The list of uses in % looks like this:

Residence wanted	28
Residence to be let	18
Time and place (culture)	13
Leisure activities	11
Selling	8
Contact (person to person)	6
Buying	4
Swap residence	3
Write what you want	3
Arrangements in "BYKERNEN" or the tenants union	2
Baby sitting wanted	1
Baby sitting offered	1
Others (the childrens market, suggestions, new activities, playmates, etc.)	2
Total	100

*Attitudes to the idea of the program.* We interviewed people just after they had used the computer. They were very positive towards the general idea (easy and fast access for everybody in the area to communicate). The comments had a range from "good idea" through "splendid" to "outstanding". Many found the information easy to look at in this systematic manner - more easy to use than the notice board in the supermarket or the papers.

The users all wanted to use the program again and seemed satisfied. But what about the people who did not use the program? We interviewed a random sample of inhabitants in the area, to find out about their attitude towards the program. Half of these (13) were very positive, and expressed a wish to use the program when they

needed the information. Some pointed out that the program could be more friendly to our environment, instead of lots of advertising magazines by post, which pollutes and takes trees to manufacture. Some found it cheaper (it's free of charge to use the program), and the advert lasted longer, whereas newspapers are old the day after they have come out.

Among the 50% who didn't want to use the program, half of them said they would if the computer could be used from their own apartment. "I find the idea sounds fine, but the distance is a problem seen in relation to the more easy alternative (newspapers)." The other group who didn't want to use the program were mostly pensioners. They seemed difficult to motivate to a media like our program. Some statements can illustrate: "Computers are awful! Robot! Lacks the human dimension." or "I'm not interested in computers. I will not try. I don't need more information than my newspaper can give. Let us keep the newspapers and the good old days".

*Fear of registration.* At times the public debate in the press has been rather intense about the individual's security when registered on computer. We expected this to be a barrier in the users' wish to use the program. Of 59 interviewed only one mentioned this: "It's a very serious question, which the Danes treat very naively. I'm foreign and have tried another reality, when the state interferes in the private life of the inhabitants. You should not be registered unwillingly, and in Denmark you are drawn into too much against your own free will. If your program runs on a personal computer with no links to central databases, it might be OK." The rest of those interviewed knew the issue, but found no problem in our context: "How can the state use this information? I don't care!"

*User friendliness.* We intended to produce a very user friendly program for one way and two way communication, to be used by people with no knowledge of computers. A user friendly program can be defined like this: easy to learn,



efficient in use, easy to remember and satisfying to use. From this definition we can conclude that a great many of the inhabitants will be able to use the program without any help and with a satisfactory result.

### Reflections on the ILLUMINATED PANEL.

If the public are to use this type of program on a broader scale, one must take into account that some people cannot and/or would not use it. Other means of communication should be maintained and developed, ie. brochures, local radios and television, and of course the personal contact. These different media can be seen as a supplementary provision, where the inhabitants can choose the ones that suite them best.

Used in the right way, however, computers can free the public services of the information and advisory task. The public can find the information for themselves, and save time in the social services, where the staff can concentrate on human aid and support. The program can be used by inhabitants in a local area, as an important tool in the decentralisation of democracy: not as an alien, but as a working tool to create contact and overview in the local community. The inhabitants can get in contact

when they have the same interests. The social worker can support the creation of self help groups and local networks. In the longer perspective the politicians and the councils can communicate.

The main point one has to remember is that people will communicate only if they have something to communicate about, and not just because computers can make the communication possible.

### The AGREEMENT PROGRAM.

One of the ideas of the project was for us to move out into the borderland of the usage of EDP, ie. to experience the area where the usage of EDP is open to criticism by some people for either ethical or other reasons. We think that we have partly attained that with the AGREEMENT PROGRAM. Only partly, however, because unfortunately we did not have time to test the program in practice before the project had to stop for economic reasons.

We made a program which could be used directly in connection with review or assessment interviews between the social worker and the client. The program contains:

### Impression of AGREEMENT PROGRAM

Action plan No.	Aarhus, xx.xx.xx	
Concerning:	Social worker:	
Keywords for current status quo:	Cause of application. Ideas. Possibilities. Since last meeting.	Main problems. Resources. Barriers.
Long-term aims:	What does the client want from his contact? with the social administration office? Possible treatment and rehabilitation considerations. Plans for the future. Economy, etc. Disagreements, if any, are stated.	
Short-term aims:	As the long-term aims but more concrete/topical.	
The client's action:	Big and small agreements - with dates.	
The social worker's action:	Big and small agreements - with dates.	
Grants:	Sources and period of time.	
Comments:		



The social worker can write text in the space on the left. On the right are key words which appear when you are to write about the individual items. In addition to the case assessment aspect, the program contains the possibility of incorporating and printing material from a database. Here the idea is to give the client the precise information, "tailor made" to suit the specific needs which occurred during the interview. The social worker and the client can choose information from a number of selections. Today, information is normally given by means of forms and pamphlets, where a large part of the information is irrelevant for the individual person. The selections are as follows:

1. Generally
2. File access
3. Housing application
4. Once-only expenses
5. Holiday allowance
6. Installation grants
7. Capital
8. High school
9. Possibility of complaint
10. Course, schooling, etc.
11. Duty to disclose all material facts
12. Rehabilitation
13. Tax and social aid
14. Rates
15. Repayment
16. Appointments information
17. Worth knowing
18. Changes in legislation (news)

Information under one or more of these categories is printed together with the action plan which follows the assessment. Concurrently, one print is made for the file and one for the client to take home. The program can print former agreements made with the same client so that the progress in the case can be followed by the social worker, the client and the management. For instance, this could be used as a way to prioritise decisions. The database was a specific wish of the clients during the development process.

An important aim of the program is to

capture/visualise the dynamic elements in the process, to improve communication and to create more openness about the contents of the process, and about the aims of the client and the social worker. We think that in a harassed, bureaucratic social administration office the program can strengthen the clients' security and knowledge. However, according to the law at present in force about protection of data files, the program will probably be prohibited in Denmark as it is not allowed to store that kind of data in EDP.

The program was developed in close co-operation with social workers and secretaries in a social aids group of the local council. We started from a problem oriented analysis of the social work activity in the group - ie. in the everyday life of the social worker, secretary and client. An unemployed person enters the room and then what happens? What are the problems in communication, or understanding the welfare system, etc., for the social worker, the secretary and the client? The EDP opportunities are not introduced until later on as a possible part of a solution. This is done deliberately, as the employees are experts in the social work, and not in EDP.

### **Publications.**

We have described the development and perspectives of the two programs in two separate books. Our experience of the development process has also helped us to formulate a method which can be used to aid the computerisation of a place of work. This is described in a third book. Furthermore, we have produced a 30 minute video which shows how the program ILLUMINATED PANEL works in practise in Aarhus city. Finally, samples of the two programs have been made. Unfortunately, books, video and programs exist in Danish only. This is unfortunate because different seminars and conferences have taught us that in the West European countries technology problems within the social sector are very much alike. We can certainly learn from each other.



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## Conclusion.

We have experienced exciting progress of the project and would have liked to continue if the financial circumstances had permitted us to do so. We attempted in vain to make different private companies participate in an application to the EC for research funds. However, we hope that social workers in Denmark will reap benefits from our results and begin to be more active in their use of the new technology. No doubt EDP is and will become a good tool in social work. But especially in our profession, with big human problems and much use of human intuition, it is very important to find the

right balance between the human being and the computer. Furthermore, we have learned from personal experience that computer systems are still in their infancy when it comes to technical simplicity and user friendliness. Just compare the operation and dependability of TV, video and refrigerators to those of computers and programs. There is still a long way to go and it would be advantageous if social workers could participate to a larger extent in this development task in the years to come.

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