Integration versus isolation? implementation strategies for ICT teaching in social work curricula

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Abstract

The paper considers different strategies of curriculum implementation regarding ICT (Information and Communication Technology) education in schools of social work. It concentrates on ICT in its role as the *content* of social work education, not on educational technology. Theoretically, an integral approach of ICT teaching ('social informatics') is considered an adequate strategy for up to date social work education. In practice however, the institutes of vocational education have not arrived at a full integration of social informatics. Some conditions are discussed that support integration as an implementation strategy.

Introduction: 'social informatics' revisited

From the end of the eighties and the beginning of the nineties, most western countries were engaged in the implementation of ICT in social work education. However, not all countries involved showed the same developments and there are differences as to the effects on the curricula and contents of education.

At the Husita-3 conference in 1993, a research project was presented that focused on the degree to which social work courses in ten EC countries account for the increasing impact of technology on the day-to-day service practice in the fields of social work (see Grebel & Steyaert, 1995). This research was based on the concept of 'social informatics'. This concept keeps some distance from computer skills and focuses on *information*. Social informatics relates to the educational use of practice applications in schools of social work. In this concept, the relationship between ICT and the professional social worker is emphasised: the ability to gather and interpret data efficiently and effectively into functional information for professional acting in social work settings, and making effective use of IT applications. The basic principle is the thesis that ICT may be considered as a possible instrument for social work. Use of ICT aims at supporting and/or improving social work practice, both directed at the internal working process in a social work organisation, and at the external relations of the organisation with the surrounding social system. Using ICT makes it inevitable that social workers need to learn the elementary technical aspects of ICT. It will also be useful for workers to get acquainted with

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software applications. However, social informatics is not about technological aspects. Social informatics does not mean learning about computers, nor training in computer skills, or the use of word processors, spreadsheets or databases. Social informatics is about the need for, and the use of, information in social work practice (Van Lieshout, 1993).

The question addressed in this paper is whether there have been new developments in this area, and if so: what are the characteristics of these developments. Are schools of social work guided by the integral strategy of social informatics or do they prefer a strategy of the isolation of ICT education in order to strengthen its position in the curriculum? What has happened in social work education with respect to the qualification of social work students in vocational ICT usage? A brief review of the sections on 'Vocational Education and Training' in Steyaert et al (1996) suggests that the countries involved did not make very much progress in terms of curricula development in the last ten years. What lessons can be drawn from this?

In order to answer this question we will take the Dutch situation as a case. The concept of social informatics was developed in the Netherlands and got its first elaboration there. Although the Dutch development shows many specific traits, it also contains some general elements that might be interesting for other countries as well.

The Dutch case

In 1989 the Dutch national government funded a project to develop an advisory curriculum on ICT teaching in social work education (Roosenboom, 1993). This project aimed to support the schools of social work in qualifying their students on the professional demands regarding the use of ICT in social work practice (social informatics). The basic philosophy of the curriculum was elaborated in 1990, together with a content description of social informatics and advice for implementation. Summarising briefly, the main characteristics of the curriculum are:

• a firm *relationship to practice*, based on research regarding recent develop-
ments in social work agencies and the use of 'agency systems' (i.e. ICT
applications developed primarily for a specific professional practice field);
• *integration in other disciplines* of the curriculum, focusing on 'information' in
social work, not on computers and standard computer applications.

During the period 1992-1995 fifteen modules of learning materials were developed, based on this curriculum.

In 1997 we investigated how the Dutch schools of social work had adopted the results of this innovation policy. The empirical data for this evaluation are drawn both from interviews with actors in the schools involved and study of documentation. We also made use of observations during our activities as consultants in schools of social work. The main research question was formulated as follows: *How and in what degree did the Dutch schools of social work make use of these new ideas and new materials in their curriculum construction?* In answering this question we concentrated on the first stage of the implementation process and looked at two aspects of implementing ICT teaching in social work curricula:

1. *curriculum implementation*: what educational structure is given to ICT
education in the social work curriculum?
2. *implementation policy*: how does the school management realise this
curriculum implementation within the institute?

In order to classify the various curriculum strategies regarding the implementation of ICT education we constructed a typology. The curriculum implementation concept has

been operationalised using two dimensions: the *level of attention* and the *embedding in the curriculum* The combination of these dimensions results in a simple typology that can be used to give a concise description of the development of ICT teaching in social work education. An interpretation of this development is given with regard to the aspects of implementation policy of school departments and conclude with some recommendations. Every section starts with an explanation, followed by the outcomes of the Dutch research project (Van Lieshout et al, 1998).

Two dimensions of curriculum implementation

Level of attention

With regard to the level of ICT education we use the distinction between the *appreciation* level and the *application* level (Grebel & Steyaert, 1995). The level of appreciation means the student's ability to appreciate the possibilities of standard ICT applications; the level of application deals with the ability of social work students to integrate professional ICT applications into social work activities. Appreciation level ICT education can be characterised as a general introduction to the uses of electronic data processing in information provision (computer literacy). Its learning objective is to serve as the starting point for the application level ICT education (vocational use of electronically generated information in social work practice).

The Dutch case: During the academic year 1996/97 the schools of social work in the Netherlands had an average student workload of 34.6 hours for basic or introductory informatics courses and an average of 48.7 hours on the vocational use of ICT (measured by the average number of 'study burden units' in relation to the appreciation and application level ICT education). This means that the schools were paying almost 1.5 times more attention to application level ICT teaching. This is rather a remarkable figure because only five years earlier computer literacy took the major part of ICT teaching in schools of social work.

Embeddedness of ICT education in the curriculum

The dimension of 'embedding' concerns the manner in which elements, with respect to the content of ICT education, are brought into the social work curriculum. We discern two positions on this dimension:

1.   ICT education gets an explicit place as a separate field of study in the curriculum (for example, a discipline on its own next to other disciplines);
2.   the various topics, with respect to the content of ICT learning, function more or less explicitly as aspects of other disciplines in the curriculum (for example, as a specific instance of this position: thematical integration of ICT education).

The Dutch case: In the academic year 1995/96 vocational ICT education (application level, often called 'social informatics') occurred twice as much as a separate discipline than as part of another discipline in the Dutch social work curricula. There seems to be a slight shift towards integration. As to computer literacy basics and computer skills (appreciation level): these were presented mainly as separate disciplines. There are strong indications, however, that basic (introductory) ICT teaching as a separate discipline will disappear in the near future; appreciation level ICT training will be increasingly organised as a (remedial) part of the study skills courses.

A typology of curriculum implementation

The combination of the two dimensions results in a matrix that can be used to classify the curriculum elements of ICT education, placing them in one out of four quadrants (see *Figure 1*).

	Separate discipline	Aspect of other disciplines
Appreciation level	I	II
Application level	III	IV

Figure 1 : Types of curriculum implementation regarding ICT teaching in social work education

Quadrant I

This quadrant is the place for computer basics courses that are a separate discipline in the school curriculum. It concerns appreciation level education with a high emphasis on the impact of *information*. If this emphasis is lacking, we would rather place this course in quadrant II. For example, when a course that carries the title of computer literacy actually consists of training in a specific word processing application.
A course in quadrant I is usually supervised by a teacher who has a special assignment for this task. The students become acquainted with the elementary ways of thinking and the applications of electronic data processing and information provision. The significant characteristic is "getting acquainted with...".

Quadrant II

This quadrant concerns those instances of ICT teaching that regard some aspects of introductory level education without becoming explicitly embedded in a program of study. It concerns mostly forms of ICT teaching whereby ICT applications act as *learning tools*. For example, SPSS training in a research seminar, word-processing training in a study skills program, or hands-on training in basic computer skills.
The teachers of this type of ICT education vary with the competencies needed in relation to the applications concerned. The students mainly learn how to use the computer configuration and/or the application in question.

Quadrant III

In this quadrant we place the ICT courses with titles like 'vocational informatics', 'social informatics' and 'applied social work informatics'.They hold a separate place in the school curriculum and there is a special teacher assigned to the field of study. The learning contents have been arranged in a framework that focuses on professional questions regarding information provision in social work agencies. Mostly the teaching is organised in relation to the professional use of 'agency applications'. The students learn to evaluate the possibilities of these applications from a professional point of view.

Quadrant IV

The field of study in this quadrant agrees with that in quadrant III. The learning contents are, however, divided into 'modules' that might be built into other disciplines of the curriculum. That is why this quadrant contains those aspects of the field of vocational ICT education that are thematically integrated into other parts of the curriculum.The teachers concerned are the 'regular' teachers of these other disciplines. They have

'woven' the ICT aspects into their courses. The students learn how to use the relevant ICT concepts and applications as an integral part of a professional working method.

Of course this typology is a construction. In reality there are mixed types and transitions between types both regarding level of attention and embeddedness into the school curriculum. Furthermore there may be different types of ICT teaching in one school of social work at the same time, partly resulting from a difference in development between the various departments. Using this typology we can trace the history of curricula development regarding ICT education in Dutch schools of social work.

The 'dynamics of the curricula' in Dutch ICT education

Roughly speaking two movements in the development of these types of curriculum implementation can be distinguished:

The *first phase* (from 1985) started with the relatively uncontrolled introduction of various teaching activities that we would classify in quadrant II. Meanwhile one could observe the gradual development of a systematic conception and filling-in of an appreciation level course (quadrant I). This computer literacy education reached a completely elaborated form in the end of this phase (1989), and there were first initiatives for the combination of computer literacy and vocational computer applications. The need to continue on this road was clearly recognised, leading to ...

The *second phase* (starting from 1989) when the Dutch national curriculum on *Social informatics* was developed. This curriculum contained both a concise description of a computer literacy course (quadrant I) and an elaborated description of an application level of ICT teaching (quadrant 4). In the beginning the basic philosophy of this curriculum did catch on in schools of social work, but the actual development went a different way from that envisaged by the developers of the Social Informatics modules. *Integration* of ICT teaching in other disciplines did not become part of the educational policy of schools of social work. The learning materials corresponding with this philosophy were mainly used for ICT teaching as a separate discipline (quadrant III). In the meantime computer basics gradually disappeared from the scene. Although the vocational ICT teaching was added to the appreciation level education, the total quantity of *sbu* (study burden units) for ICT teaching stayed the same in social work studies. This generated two kinds of effect:

* a shift towards ICT teaching according to quadrant II;
* the need for executive ICT teachers for learning materials that are at both the appreciation level and vocationally directed.

Why did the process develop in the indicated direction and not rather in another one? This question can only be answered in a satisfactory way if one considers the complexity of external and internal conditions. We concentrate on only one aspect: the *curriculum implementation policy* of a school of social work, i.e. the way in which the internal actors in a school contribute to the introduction of ICT teaching in the school curriculum. In relation to the typology in Figure 1, the Dutch national curriculum on *Social informatics* emphasises an integrated approach to the application level education (quadrant IV). Most schools do not arrive at such an integration in their curricula. We have to look for implementation conditions that support a strategy towards an integrated approach. Such a strategy is needed for an adequate and up-to-date professional education.

The curriculum implementation policy

To make the implementation of a curriculum a success, many factors have to work together in a unique combination. A restricted number of *general factors* go together with a variable number of *specific characteristics* of the local situation. Moonen & Kommers (1995) reviewed the international research on educational innovation. As the most important general factor it indicated that school managements should create favourable conditions for curriculum innovation (budget, staff capacity and time facilities must be adequate for innovation activities). The next factor is the availability of technological infrastructure (computer facilities, specially equipped classrooms, technical support). Another factor - too often underestimated in innovation policy - is the need of teachers with expertise on computers in learning processes. In this respect special attention should be given to contact between teachers of different schools; this is considered in the literature to be a major condition for success in innovation processes.

What factors, according to the respondents in the Dutch research project, played a dominant role in the decisions about curriculum policy regarding ICT education? After exploring their answers we arrived at two aspects that mainly account for the actual situation in the Netherlands : the curriculum implementation strategy followed, and the phase in the implementation process.

Implementation strategy

In implementing ICT teaching in the school curriculum different strategies are followed, varying from *participation* (bottom-up) to a *directive* (top-down) strategy.

In a top-down strategy the school management starts from a definite vision regarding the innovation concerned. Teachers are only involved in the second stage of the process; the design takes place at the managerial level. The top of the organisation makes a blueprint of the innovation process as a whole before introducing it in the school. This strategy has the advantage that changes can be implemented rapidly. Teachers are obliged to act according to the new way of working. The critical success factor in this strategy is the creation of support for change.

In a bottom-up strategy the first step towards change is taken at the lower levels of the organisation. The innovation is designed on a small scale. It has the advantage that the teachers themselves can build up the change gradually. The process takes a long time, however, and there is the risk that the supporters of innovation get isolated from their colleagues and become voices in the wilderness. The critical success factor in this strategy is getting the commitment of the school management.

In between these two extreme strategic positions lies the middle course. At first the management gives a rough sketch of the desired innovation. Next, there is room for experimenting with those broad ideas leading to the filling-in of a strategic framework. From there a broadening of the process takes place, starting with the introduction of the innovation in the school organisation. It is an ongoing interaction between policy-making and directing of the change process by the school management on the one hand, and the development and the application of the innovation by the teachers on the other hand. The critical success factor in this strategy is a well-directed process, with clear appointments with regard to time schedule and the products to be delivered.

The Dutch case

The three implementation strategies can all be discerned in the Dutch schools of social work. Although the strategies do not occur in an extreme form, the schools display a clear positioning towards one of them. Three-quarters of the institutions followed the third strategy in some way. In these cases a process of iteration often started with the enthusiasm of one teacher who initiated the move towards ICT education. Then the

school management more or less took over in directing other teachers on further development. This process strongly depended both on the motivation of the teachers concerned and the management.

Phases in the implementation process

In implementing ICT education in their curricula the schools of social work roughly pass through three phases: adoption, introduction, and incorporation. The introduction of ICT infrastructure itself is considered here as a material precondition.

The *adoption* phase is characterised by ICT education getting a place in the school curriculum. In this phase the change towards ICT is more and more accepted and the decision is taken to introduce ICT teaching. All Dutch schools of social work have gone through the adoption phase. On the individual level, however, not every teacher of social work is convinced of its necessity.

During the *introduction* phase there is active implementation of the change towards ICT education. About three-quarter of the Dutch schools are still working on this implementation process. More and more teachers are going to use ICT in their teaching activities and ICT is gradually getting a permanent place in the school curriculum.

The phase of *incorporation* is entered when ICT education stays on the curriculum irrespective of the personal efforts of individual teachers. Some schools of social work in the Netherlands are showing the first signs of this institutionalisation; at the same time however, they still have to cope with problems in the sphere of introduction. In many Dutch schools the appreciation level education (computer basics) has been institutionalised substantially, but most of the application level education (vocational use of ICT) depends of the motivation of individual teachers and is not explicitly a part of the school's curriculum policy.

Conclusion

In educating and training social workers the schools of social work are increasingly paying attention to ICT. This article was intended to offer some insights in how ICT teaching in Dutch social work education got its present form. We investigated ICT education in social work curricula on two dimensions: 1. level of attention; 2. embeddedness in the school curriculum. In relation to these dimensions, the Dutch national curriculum on *Social informatics* can be characterised as emphasising an integrated approach for application level education.

Looking back we may conclude that this approach of ICT education in schools of social work – at least in the Netherlands – fills a need of the actors in educational institutions and is appreciated by them accordingly. This appears from, among other things, the scale and the diversity of the implementation of ICT education in the social work curricula. At the same time we must conclude that the desired integration approach of social informatics did not take root in the curriculum philosophy of schools of social work. In our experience, ICT in social work education is mostly identified with educational technology as such (teaching and learning with courseware, basic computer skills, and the use of standard applications). Relatively little attention is paid to the use of specific social work applications. In our opinion the 'agency systems' should be the core learning objective of ICT teaching in professional education.

Summarising, we conclude that a strategy towards an integrated approach to social informatics is necessary for an adequate and up to date professional education. A successful implementation of this approach is more feasible when the following conditions are fulfilled.

- The management of schools should be convinced about the importance of professional demands regarding the use of ICT in practice situations for qualifying social work students, and must create an organisational environment that facilitates innovation in the educational program.
- A training program should be developed to teach the teachers who will be responsible for the integration of social informatics in their own discipline. (Social informatics should be implemented in those parts of the curriculum that treat the core competencies of social work practice.)
- There must be suitable teaching/learning materials, and these materials must be flexible: teachers and students should have enough possibilities to influence the materials.

The first condition is one that cannot be fulfilled through the availability of good technical infrastructure and/or the expertise of trained staff. It is an intrinsic factor of a school organisation and of school management. Trained staff and good infrastructure are *necessary* conditions for curriculum innovation. But they are not *sufficient*. During the process, permanent attention should be given to the attitudinal conditions: *management commitment* and *teacher motivation*. These cultural-psychological aspects might form the decisive factor in a successful integration of ICT teaching in a curriculum.

Today the situation in schools of social work is favourable to stimulating ICT education in this direction. This is partly because teachers increasingly have a positive attitude towards ICT as an educational *tool*. However, considering ICT mainly as an instrument that has only a minor relationship to the contents of social work, takes the risk of creating a gap between the education of future social workers and the requirements of today's profession. Closing this gap between education and practice regarding vocational use of ICT asks for an educational approach that combines two elements:

a)   ICT teaching with realistic cases by teachers of social work, and
b)   The integration of ICT teaching in the core disciplines of the social work curricula.

Integration as a curriculum strategy for social informatics will be no sinecure, demanding much effort from both school management and staff. But it will make a major contribution to the professional qualification of social work students. It also gives the schools the opportunity to develop and give further education for the practice workers already engaged in the social work field.

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