



## ICT - an ally and an alien

### The role of ICT in Swedish popular adult education organisations

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#### Abstract

*This article is focused on Swedish folk high schools and study associations as organisational settings (and not explicitly at teaching efforts and educational activities). It concerns results from a research project about introducing and implementing information and communication technology (ICT) in these value based organisations. Our research has mainly been conducted through interviews with people engaged on different organisational levels. In this article empirical results are analysed in relation to actor-network theory (ANT). Human and non-human actors are linked together in a web of relationships referred to as an actor-network. Interaction among actors, contradictory roles of ICT and relations to essential values in these organisations are discussed.*

**Keywords:** Information communication technology; popular adult education organizations

#### Introduction

The relationship between information and communication technology, ICT<sup>1</sup>, and organisation has been paid attention to by researchers during the last decades. In organisations, in general, ICT applications become more and more complex but also more tightly integrated. ICT is a crucial, powerful factor as it simultaneously is seen to have a transformative capacity that enables and facilitates restructuring or changing of organisations and their members, in particular related to organisational, economic and social consequences (Bloomfield et al., 1997; Monteiro, 2000). Furthermore, it has become increasingly apparent how new technologies play a key role in organisations (Lanzara & Morner, 2003). There also exists a mutual dependency between

the use of technology and social context. If there is a need for information and communication the technological push is matched by the demanding pull in the organisation (Orlikowski & Robey, 1991; Bloomfield et al., 1997;). Thus the relationship between ICT and organisation can be seen as aspects of social structure that are mutually implicated. However, so far, there have only been two studies, a survey carried out in 2003, focusing the use of ICT in Swedish popular adult education organisations (Landström, 2004) and a follow-up (Mellberg, 2007). These studies were aimed to get knowledge about the use of ICT, organisational conditions and strategies, according to administration, communication and pedagogical settings. Accordingly there is a demand for research focusing the interaction between ICT and the organisational dimension in these settings.

The aim of this article is to from an organisational point of view investigate and describe what happens in popular adult education organisations, such as folk high schools and study associations, when ICT is introduced. What is the role of ICT? What does the interaction between ICT and different employees in these organisations look like? The article concerns results from a research project<sup>2</sup> about introducing and implementing ICT in these value based organisations.

## **Swedish popular adult education**

In Sweden folk high schools and study associations constitute the 'popular', or 'liberal', non-formal and voluntary educational system for adults, but financially supported by the state. <sup>3</sup> 'Folkbildning' refers in turn to study circles, courses and cultural activities organised by these organisations. The term is difficult to translate in a good way. In Swedish 'folk' means 'people' and 'bildning' means 'enlightenment'. The term 'folkbildare' refers to teachers, study circle leaders, administrators or project leaders who are working within folk high schools and study organisations.

Swedish popular adult education has a long and strong tradition since the 19th century. What is unique in this sphere of educational activities compared to other educational institutions and working places, are the non-profit character of work and the organisational independence towards educational regulations for the public school system. Owners of folk high schools and study associations are county councils, popular movements and civic organisations with manifold interests. Often they declare particular values or political ideologies. About a third of the folk high schools have county councils as trustees connected to regional public sector organisations. All these educational organisations are traditionally value based and in their sphere of activities more or less oriented towards the civil society. Besides education they arrange a broad range of cultural activities.

In practice the democratic intentions are manifested in the whole organisation, not just in teaching and learning settings where all members, working in groups and study-circles, are said to be equally taking part in the dialogue. The face-to-face interaction is an essential platform as well as active participation. The importance of dialogue is stressed in these contexts and as a consequence an electronic network, Folkbildning.net, has been built up to offer options to communicate virtually on net, meant as a complement to real face-to-face interaction (FBR, 2005, 2008). In 1996 the popular adult education was offered subsidies with the aim to develop and try out methods for the pedagogical activities in distance education, using ICT (Andersson, 2002).

There are no regulations from the state when it comes to course content or teaching methods. The folk high schools are free to create courses according to their particular interests and own profile. To attend a folk high school you

have to be at least 18 years old. Normally people with short earlier schooling are preferred for admission. All schools have a general long-term course qualifying for studies at university, besides many long- and short-term specialised courses in music, media, arts, handicraft, theatre and languages, some of them vocational. Study associations organise mainly study circles, but also, for example, public cultural events. Every study association has more or less its own profile. The activities are very much the same as in the folk high schools, however, running more infrequently, mostly a couple of hours once a week (Laginder & Landström, 2005).

## Theoretical framework

Focus is on the role of ICT as well as the interaction between ICT and employees in folk high schools and study associations, organisations with a traditionally strong anchorage in face-to-face interactions. Four different settings were selected and visited in 2005–2006.

Concepts of the actor-network theory, ANT, are used as tools of analysis to understand the role of ICT in these contexts. The theory describes how actors mutually create and assign each other roles in constructing and working in networks. The interaction among actors involved is stressed. Actor and network constantly redefine each other; one is dependent on the other. The actor-network theory claims that any actor, whether person, object or organisation is equally important to a social network. Thus, human and non-human actors are linked together in a web of relationships referred to as an actor network (Latour, 1987). Developed as an analysis of scientific and technological artefacts, ANT's theoretical richness derives from its refusal to reduce explanations to either natural, social or discursive categories while recognizing the significance of each (Latour, 1993).

*Interaction* between people and technology is looked upon as a socio-technological whole, in which the human and the non-human are assigned equal value in terms of *negotiations*. An important component of the actor-network theory among the actors is the negotiation of their roles with other actors when achieving their own positions by participating in the network. The whole process, e.g. the introduction of ICT, deals with processes of negotiations that include strategies to mobilize allies, actors who represent the initiators constituents properly, to get the innovation stabilized and institutionalized. Thus, from an ANT perspective, everything in social life can be seen as the result of successfully negotiated networks (Latour, 1987, 1998).

In this approach, the role of technology, such as of ICT, is treated in the same way as that of the human actors, which means that even non-human actors can be assigned *power* to affect the setting. When developing technologies, interests of various actors will become embedded in the artefact, so-called *inscriptions*. Because technologies are social artefacts their material form and function will embody their sponsors' and developers' objectives, values, interests and knowledge of that technology. Social meaning but also power can be inscribed into any material or medium including formal texts and technical objects. That means that components of organised human agency and knowledge are inscribed into and delegated to technology. Non-human artefacts can be used as delegates for particular human interests as well as hide decision processes from view (Callon, 1991; Bloomfield et al., 1997; Lanzara & Morner, 2003). The way that technologies are shaped by actors and how in turn actors are shaped by technologies reflects the declaration of actor-network theory that the world is full of hybrid entities containing both human and non-human elements whose analytic separation is difficult (Latour, 1993). In the networks that thereby emerge and in which both people and artefacts are integral parts, everyone is viewed as an actor whose influence is decided by the development process or the social context (Grint & Woolgar, 1997; Bigum, 1998). The heterogeneous nature of actor networks also makes up the context

under the influence of a wide range of surrounding factors (Akrich & Latour, 1992).

Interpretations of technology, the role of ICT and *technological frames*, are central to understanding technological development, use and change in organisations. Technological frames are cognitive structures or mental models that are held by individuals or by groups of individuals. The concept technological frame is used for examining the underlying assumptions, expectations and knowledge that people use to understand technology, here in organisations (Orlikowski & Gash, 1994).

There is no orthodoxy in ANT and different authors use the approach in substantially different ways (Latour, 1987). Hence, the way the theoretical frame, actor-network theory, is used in this article to some extent means a limitation of the theory as the concept actor is the main point. The interaction between the non-human actor, ICT, and human actors is the prominent figure. The concept network, certainly a part of the interaction, mostly constitutes the background, here actors at the organisational level in these popular adult education organisations. When analysing what happens in these organisations when ICT is introduced, interaction, negotiation, power, inscription and technological frames are the main concepts dealt with.

## **Four case studies**

The empirical base is case studies involving two folk high schools with dissimilar ownership, and two local study association settings, also grounded and run by various popular (or social) movements. It means that two folk high school settings and two study associations have been involved and similarly examined, in total four units. They are located in different parts of Sweden, to get geographical diffusion. These four are examples of organisations that constitute the popular non-formal and voluntary educational system for adults in Sweden.

The research has mainly been conducted through interviews. In all 33 interviews took place, each of them for the duration of 1–2 hours. Employees and decision makers engaged at different organisational levels, mainly local and regional, and with varying focus due to their differing tasks were interviewed. Typical assignments for employees within the organisations, beside educational activities, are supervising, course administration and market-oriented activities. The empirical data was accomplished by qualitative analysis (Starrin & Svensson, 1994) related to the actor network theory (Latour, 1987, 1993).

The four visited settings will be presented below.

## **Character of the folk high schools and the study associations**

The first folk high school visited belongs to the trade union and is located in the countryside near a big city. It was started in the middle of the 20<sup>th</sup> century by the labour movement to recruit participants from the whole country to short-term trade union and political courses. In 2005, when visiting the school, a distance course concerning trade union and political issues was offered. In this context ICT appears as a natural tool at an organisational level but also in courses aiming at information and communication activities. The second folk high school, run by a county council, is still a typical boarding school with an aesthetic profile. This school was established at the end of the 19<sup>th</sup> century to fulfil regional needs of education for the youth in a rural area. The school culture rests on a Grundtvigian and humanistic tradition. ICT is

important, besides being an administrative tool, mainly for conducting a 'Writers (authors) course' at distance. Both folk high schools also had one branch school each where most students were immigrants participating in general long-term courses.

The two study associations are rooted in different popular movements. Traditional interests of the first one, a local setting of the Adult Education Association, are about rural areas and regional development. Target groups are immigrants, senior citizens and disabled youth. A lot of study circle activities concern aesthetic subjects and handicraft, but also relevant ICT/computer courses. The second local setting consists of two earlier study associations that some years ago joined together in the Census Study Association. With the fusion two different cultures were combined, a religious and social organisation and an organisation representing salaried employees. The offering of courses is fairly wide, sometimes with ICT support. There are courses concerning existential issues, language and music, as well as courses aimed at vocational certificates in 'economic' subjects. Target groups are mainly immigrants, senior citizens and employees needing further training due to their professions.

Henceforth the four cases are generally not separated but looked upon as one institutional context of popular adult education.

### **ICT – an actor of change**

A general conclusion drawn from our empirical data is that in the early 21st century computerising of the administration in these popular adult education organisations has turned out to be more and more common, as in other kinds of organisations (cf: Bloomfield et al., 1997; Monteiro, 2000). The greatest importance of ICT is connected to the central administrative system, dealing with economic matters. However, the role of ICT is not equally strong in all of the four organisations. The trade union school seems to be the most frequent ICT-user, probably because of its close relationship to the network of trade union organisations outside the folk high school. In trade union settings ICT was strategically introduced already in the 90s as an administrative tool. Furthermore, in this folk high school the use of ICT was early on regarded as a guarantee for "the quality of popular adult education", with dialogue as a key word. One of the informants states that:

Everyone was given the possibility to communicate with everyone else on the net.

Any actor is looked upon as equally important to the network within the organisation.

The popular adult education settings are not isolated but have to be regarded as a part of society, not only influenced by the implementation of ICT. Competition with other agents and economic realities are other tangible conditions. The increasing amount of distance courses (cf: Byström et al., 2004) is one example of how to claim the existence of this kind of organisations. The role of ICT might strengthen these organisations as regarding this non-human actor as a facilitator of communication, contributing to promote 'the democratic development in society', for example by inviting everyone to take part in their courses without geographical limitations. According to the ideological platform of the popular organisations, for example due to the importance of face-to-face interactions and discussions, virtual meetings imply a change. Participating in virtual distance courses means activities independent of time and distance on one hand, but on the

other there will be a loss of the close individual face-to-face dimensions. One of the informants states:

The perspective of the specific popular adult education is lost” and the folk high school is compared to a correspondence school.

Moreover distance courses and the use of ICT may constitute a threat to the existence of folk high schools in their traditional form as a boarding school, because of financial reasons. Especially in some target groups’ perspectives it is cheaper to take part in a course online than attend a course physically.

Not just the way of distributing courses but also the content of affording courses, distance courses included, means a change. There seems to be an increasing amount of courses with quite a new content in these traditional popular settings, like keep-fit measures, licence to drive a horse transport, sacred dancing etc., sometimes with ICT support. This change is to be understood in relation to current trends but also as a strategy of survival for these organisations, threatened for example by the widespread access to ICT, Internet, in Sweden. In 2007 more than 80 percent had access to Internet at home (SCB, 2007). A lot of people, who earlier visited popular adult education organisations may nowadays pursue interesting activities on their own without organisational involvement. Technological affordances also offer possibilities to take part in e-learning settings and courses all over the world. The role of ICT in that context is not just that of a competitor to popular adult education actors but simultaneously a challenger and an actor of change regarding structure as well as content of the organisations.

Based on our empirical data the social context of those four value based settings seems to be influenced not just by changes and opinions in the surrounding society but also by the affordances by the non-human actor ICT (Akrich & Latour 1992; Grint & Wolgar, 1997). In the following we will go on to examine the interaction among human and non-human actors in these social contexts.

## **Contradictory roles of ICT**

People interact differently with the non-human actor, ICT, due to their individual technological frames such as needs, earlier experiences, interest in technology etc. The extent and use of applications differs in the organisations among the employees. Some of them have as a matter of course integrated ICT as a *collaborator*, a kind of equivalent actor, in their daily life both inside, among the staff, and outside the organisation. Others consciously strive, and manage, to reduce their interaction with ICT radically. Working all day at a computer in the office means lack of interest for using ICT outside work. An administrator comments:

I have not got any computer at home and I do not want any either.

ICT has got the role of a *‘nobody’* in her private life. The interaction between the actors is reduced and ICT has got the role of an alien.

The individual interaction with ICT is also influenced by the length of the period as an employee in the organisation. There is a difference in human relationship to ICT according to “who was inviting to the meeting”. With more than ten years in the organisation, you probably were there before the non-human actor ICT appeared, and may experience a pressure, f.ex. from the management, to accept the influence of a new powerful actor. When asked about the introduction of ICT in the organisation some years ago there were comments like: “One day ICT just occurred” without asking for it, nor realising its roles. In cases like this the role of ICT may be that of an alien introduced

without any negotiations (Grint & Woolgar, 1998). On the other hand there are employees, newcomers, mainly young males, who as economists have an intense interaction with ICT. According to their ICT competences they are not just responsible for ICT in the organisations but are also regarded as 'an expert' involved in projects at national levels aimed to implement ICT for administrative purposes. ICT is by them seen as an ally, a kind of *gatekeeper* and assisting *authority*, inviting them into the decision making level of the organisation. The non-human actor is even strengthening other actors' power in the organisation.

ICT is often looked upon as a natural tool, a *facilitator*, making work easier and quicker, also as a rapid *distributor* of information. From a hierarchical top-down perspective ICT can be seen as a powerful *promoter*, but also as a *distance maker*, when distributing messages from the national to the local level, from management to practice. In that sense ICT implicitly is able to include inscriptions, ideas and demands, hidden in the non-human actor. The non-human actor again demonstrates its, to some extent, embedded power. Employees claim that opportunities for dialogues and negotiations between levels have been changed, mostly limited. When ICT has got the role of a *distributor* of information from a 'bottom-up' perspective it usually deals with reporting local activities and economy, asked for by the management. More seldom there is a spontaneous communication between the different levels in these organisations, ICT serving as a 'democratic tool' in the opposite direction, a way for the management to get informed by the local employees. Findings like this may be applied to any other organisation (cf: Lanzara & Morner, 2003) but have to be given particular attention in those kind of value based organisations dealt with in the article where democracy and participation are guiding stars.

As an employee you are expected to take part in discussions and decision making, a democratic policy emphasized by these organisations. In addition, there is an amount of written information circulating inside and outside the organisation, not always relevant for everyone. This amount of information may cause organisations suffering from stress to attribute ICT the role of a *stress factor*, expressed by an administrator.

Everything nowadays tends to go faster, we are demanding rapid answers from each other, that is why we are sending e-mails all the time also inside our organisation. That also means if you do not answer your e-mails you are supposed to accept the content, even if you have not got time to read it.

The comment also demonstrates a kind of democratic dilemma. You get an opportunity to be an involved and well-informed employee sometimes overwhelmed by reading messages or to be a perhaps non-informed employee selecting your messages. Some employees are even asking for support by selecting information before distribution.

From a hierarchical perspective the individual interaction with ICT might to some extent depend on the individual position in the organisation. At the management level, for example, there is mostly an active and intense interaction with ICT and the attitude to ICT is rather inviting too. ICT is again an ally. However, the role of ICT does not differ just according to technological frames but also to the social context and individual missions in the organisation (cf: Walsham & Sahay, 1999; Orlikowski & Robey, 1991). ICT seems to contribute to strengthen already powerful actors' positions within these organisations.

In our empirical data there is one group of actors whose interaction with ICT obviously differs from the others, the study circle leaders. They are working part-time only a few hours a week and do not have an office or computer at

work. Often their courses are located somewhere else, at a school or a hospital for instance. This means that they seldom get involved in small talk and spontaneous information. They are, compared to all other groups in these organisations, less equipped and therefore forced to use their private computers, if any. Although study circle leaders are an important group managing the main activities in their organisations they are mostly excluded from information and communication on the intranet. Reasons pointed out are financial restrictions, part-time employment and a supposed engagement in a competing study association. Hence, there again might be a connection between a powerful position in these organisations and an active interaction with ICT?

Furthermore, the role of ICT as a *controller* is a question of power and possibility for actors to participate in the organisational life. Red flags and messages as – ‘sender has requested notification that you have seen this’ – may serve as a controlling indicator, again an inscription embedded in technology. To quote an executive at the local office:

We have got an account applied for everyone using the net. That means that we know exactly who is online, every moment. And we also know, if we need to, because of security reasons, where they are surfing. So we are able to control everything.

ICT, when allied with authorities, is assisting not just when controlling employees’ fulfilment of duties but also their individual interaction with ICT. The non-human actor then becomes part of the power concentration, sometimes in an invisible manner like a ‘controlling eye’, but is also serving as a means demonstrating employees’ abilities and capacities to handle amounts of information up towards the management level of the organisation.

Even when technology is frequently used, and its possibilities in respect to communication are accepted, employees regardless of hierarchical position recommend the physical meetings face-to-face. This is a traditional expression according to the Swedish popular adult education settings. Technology is not always viewed as the best way to convey a message due to the weight of the body language hardly possible to mediate electronically. The empirical data also demonstrates how a more technological approach to communication, and the role of ICT, might cause more distance between human actors. To avoid the role of ICT as a distance maker some employees meet regularly every day face-to-face or use the phone when communicating. ICT, in terms of the computer, is by them consciously excluded and again reduced to the role of a ‘nobody’.

Thus human actors have at least a twofold relationship to ICT. For example, on one hand ICT is made an actor, included and active in the interaction and used to assist in everyday work, an ally. In this role ICT can be understood as an independent actor. But on the other hand ICT can be a ‘nobody’, consciously excluded by human actors, for example when employees refuse to open e-mails or open them just to get rid of annoying ‘red flags’ (unopened messages), as a strategy to survive a stressful situation. In negotiations the non-human actor then fails to be equal to the human actors, an alien. That means a conscious human decision, to reduce the role of ICT.

To sum up, findings from our empirical data demonstrate that the non-human actor, ICT, is mainly to be regarded as a powerful actor in these organisations, an ally, just occasionally by some employees treated as a ‘nobody’, an alien.



## Conclusions

Our empirical findings expose contradictory roles of ICT in the popular adult education organisations such as: Facilitator, Assistant, Promoter, Distributor, Stress factor, Controller, Distance maker, Gatekeeper, Authority, and 'A nobody'. Some of the roles are contributing to an intense interaction and negotiations with human actors, an alliance. ICT is made an ally in all categories of human actors to the extent it is found appropriate for them to use. Concerning the relation between hierarchical levels in the organisations ICT has become an ally mostly for administration and management, but also for those human actors who get access to networks within the organisation. The individual position in the organisation influences the interaction with ICT. If you are looked upon as a more or less powerful actor in the organisation, you probably more actively take part in the interaction. Technological frames may also contribute to a more accepting attitude to the role of ICT, a relationship that can be characterized as an alliance involving actors assigned equal conditions dependant on each other (Latour, 1987, 1998). Simultaneously there are to some extent human actors in these organisations demonstrating non- acceptance related to their technological frames, then treating ICT as a 'nobody' (Bigum, 1998). On the other hand ICT demonstrates power and authority contributing to other actors' exclusion from the network. When ICT is not offered as a tool it becomes an alien in the work for those excluded, e.g. study circle leaders. But it also might be possible to conclude that ICT in turn is excluded as a conscious decision, at least by some of them. However, it has to be taken into consideration that traditionally study circle leaders are autonomous and not involved in the daily organisational life in the study associations (Grint & Wolgar, 1997).

ICT appears to be an actor of influence in interactions and negotiations with human actors at the organisational level in the four visited settings. From an actor-network perspective, related to these value based organisations, the non-human actor, ICT, can be regarded as one actor among others, but mostly a rather powerful one with embedded inscriptions representing interests and values (Callon, 1991) not necessarily in agreement with those of the popular adult education settings. That also means that prominent democratic values in these organisations, like participation, dialogue and democracy, in some contexts tend to be less focused than before. However, the increasing number of employees, newcomers without explicit traditional popular educational experiences and ideological views, may also contribute to this trend. The ideas of the popular adult education settings are not as evident and stressed as before for all employees. Besides changes in society, related to societal and economical conditions, requirements and demands from new target groups, e.g. immigrants and unemployed as well as new expectations from youth of today also mean changes inside the organisations. The competition among educational organisations, with or without ICT profiles, is another important factor influencing changes, stressed by the employees in public adult education settings.

Many actors of today are aware of the built-in possibilities in information and communication technology and do not want to turn back. In introducing and implementing ICT however, there have often been real enthusiasts, early adopters and innovators, taking it in use at the same time as those who adopt a wait-and-see policy tried to keep it back (Jedekog, 1996). Furthermore, ICT demands specific competences that force employees to lifelong learning in a different way than before, as new technological innovations appear all the time. A varying attitude between forerunners and stragglers, between gatekeepers and the driving forces implementing ICT, is still there but the gap has narrowed (cf: Landström, 2004).

To sum up, the non-human actor operates in a context influenced by a lot of surrounding factors. However, the study has pointed out ICT as a rather

powerful actor also in popular adult education organisations, allied particularly to other powerful actors. A next step in using this power of ICT would be to employ it as a facilitator aimed to more explicitly strengthen the democratic values of these organisations. The power of ICT in these contexts may require other actors in the network to become actors contributing to improve ‘the democratic development in society’ and ‘the public discussion’ inside and outside these organisations.

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<sup>1</sup> ICT – Information and Communication Technology, to underline the important communication function added to the computer. The kind of technology focused in our project is mainly work place computers (they could either be stationary or laptops). The applications are the Internet, e-mail and administration and office-applications.

<sup>2</sup> “ICT-strategies, the identity of folk enlightenment and networks in popular adult education organisations”, running 2005–2007. The aim of the research project has been to create new knowledge about what happens when the new technology for information and communication meets the particular ideological views and frameworks in organisations of popular education [folkbildning] (Landström, Jedeskog & Andersson, 2007).

<sup>3</sup> In 2006 there were 148 folk high schools and 9 study associations divided into 428 local settings. (FBR 2006).