

# A European and Swedish perspective on ICT – policies and strategies in education

## National and institutional pathways: crossings, blind alleys and uphill slopes

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### Abstract

This paper aims at answering the following questions:

1. What general goals do politicians in Europe express in national policy documents for the integration of information and communication technology (ICT) in their education systems? To develop that theme further we explored the situation in our own country Sweden as a case. 2. What policies and strategies for ICT in education do leaders of Swedish higher education institutions develop? 3. How do Swedish national priorities and academic institutional interests match?

The globalisation of education forces different value systems to meet. There is on the national level highly different political values on what kind of education system to prefer – the Scandinavian model and the American model are two extremes. There are also very different values inherent in higher education institutions, the academia, - compared with the values and visions held by the political leaders. These value differences between and within countries are elaborated and discussed. A Swedish, Scandinavian and European perspective is adopted, but a wider international outlook is also given. It is suggested that the value conflicts, often not explicit, understood or recognised, are one of the major inhibitors for systemic change. The direction of change cannot be taken for granted – the driving forces pull in opposing directions. Different visions of the future struggle to be fulfilled.

**Keywords:** ICT in Education, Policy, National political interests, Academic strategies, Value conflicts, Promoting/Hindering factors, Europe, Scandinavia, Sweden, Globalisation.

### Introduction and Aim

The study of e-learning strategies on national and institutional levels has mainly been focusing the English speaking countries: United States, United Kingdom, Australia, and Canada. Tony Bates [1] [2] and Michael Moore [3] [4] are prominent researchers in this field, but the examples and analysis they do are mainly drawn from

the aforementioned countries. Their results are therefore not easily transferred to other political, economic and cultural contexts. Also the international discourse in this area is mainly taking place in non - European and non - Nordic specialised journals.

One major difference between Sweden and United States is the way higher education is financed. An important source of income in the U.S. case is tuition fees. The universities in Sweden are not allowed to receive payment from students for the provision of higher education. Tertiary education in Sweden is financed by public means. The reason for Swedish universities to go online and educate foreign students for free is thus very limited. Therefore Swedish universities have not been active in the international internet based education business. On the other hand in the Swedish context it is hard for international competitors to compete because the national system offers the services for free and it also provides higher education in the native language, Swedish. The international competition to recruit students has in Sweden therefore been very low or non-existent in comparison with the situation between the Anglo-Saxon (US, UK, Australia and Canada) global actors on other markets.

Educational policies in Sweden have been seen as a national domain by the politicians, but the political control of the increasingly international and money driven internet based education cannot be ignored. Reluctantly the globalisation of education is acknowledged. It also gives some future promises for the not enough funded tertiary sector in Sweden. There is abundant literature about globalisation and how to understand it - its background, forces, current situation and future scenarios. A comprehensive book dealing with these issues is “The Globalisation of World Politics” edited by Baylis and Smith [5].

There are many political, historical and cultural similarities between the Scandinavian countries: Denmark, Finland, Norway and Sweden, it makes sense to talk about a Scandinavian perspective on higher education and its relation to e-learning. There are also

some important differences. Finland has been the most internationally active country in e-learning and internet based education. Sweden has had a more inward looking attitude – “first develop domestically and then create international networks and do international outlooks” has been the political standpoint. The related concept “Distance education” has never been understood in Denmark, since distances are short, but Norway and Sweden, being sparsely populated widespread countries, have a more than 100 year tradition of providing distance education before the advent of internet [6] [7].

In Denmark the public financing for e-learning students are only 50 % of the funding provided for a campus student. The reasons for that is that no physical facilities: university buildings, classrooms etc are needed in the case of e-learning. In Sweden the implementation scenario is totally different. In order to stimulate a slow changing system and to support the costly build up of services the public funding for an e-learning student have presently been set to almost the double amount of money compared to a campus student.

Sweden has invested large amounts of money for development work – from the state – directly to education institutions, but not allocated resources for follow up and research in this field to any significant degree. Denmark has a stronger research focus and Finland has developed strong ties between the business sector and the universities. The Finnish book “The Challenges of ICT in Finnish Education” [8] spells out the Finnish perspective prior to the start of the Finnish Virtual University.

In the EU-funded project E-watch a report was produced about current ICT-policies for education in Europe [9]. That study was based on pre- defined categories for analysis. The present study however adopts an interpretive approach – creating categories that summaries the content in policies using a grounded theory method and a qualitative research design [10] [11, 12] [13, 14].

The policy analysis literature consists mainly of literature concerning analysis *for* policy development (how to develop policies), but our interest here is the analysis *of* policy documents (how to understand existing policies) [15-19].

### Study 1: National policies in Europe

In order to create an overview of national initiatives for adopting ICT in education in European countries a study of national policy documents was done [20]. The aim was to:

- a) Describe and interpret the content of the policies on a general level – what changes do national politicians want?
- b) Compare different national policies – similarities and differences in policy goals?

The study was done using an interpretative approach based on official national policy documents.

### Study 2: National policy and Institutional compliance - Swedish case

A second study was done in Sweden with the aim of studying the compliance of higher education institutions in relation to the national policies. Our questions therefore were *How is policy received? What actions are taken to realise policy?* The institutional policy documents and other related documents for policy development was interpreted. How do higher education institutions respond to the political demand of providing flexible higher education using ICT? What institutional rationale can be deduced from the documents? In other words how can the decisions of the institutions be understood as rational choices taking their perspective?

### Methods

#### Study 1: National policies

##### Data gathering

Three ways of identifying the relevant national documents was tested, and evaluated:

1. “Technical navigation” i.e. through internet search engines – “automatically”
2. “Social navigation” i.e. by asking key persons in selected countries about core documents
3. Using internationally available documents with descriptive data for further analysis

The results of the three methods are discussed below and arguments for the selection of one of these approaches are given.

##### Data analysis

Two ways of analysis was used to advance understanding of the descriptive data:

1. Deductive analysis. Using the categories developed by the e-watch group – before studying the quality of the documents and their content. The pre – defined categories where: a) content development b) infrastructure and access c) teacher and pupils learning development d) partnerships e) other aspects (The results are reported in the e-watch report available on the internet [9])<sup>1</sup>. The results will not presented in this article.
2. Inductive analysis. Creating categories in order to reflect and structure the content after reading, coding and analysing the policies.

#### Study 2: Swedish case

Thus the core issue in this study was to what extent the ideas and initiatives from the government and from central authorities were reflected in policy documents at the institutions for higher education in Sweden. So we wanted to analyse the presence and the content of such local policies.

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<sup>1</sup>[http://www.eun.org/eun.org/en/index\\_ewatch.cfm](http://www.eun.org/eun.org/en/index_ewatch.cfm)

The methodology was quite simple. Via the Swedish Agency for Distance Education<sup>2</sup> we conducted a survey in the following manner. The Director General sent a letter to the Vice Chancellors of all higher education institutions in Sweden. The letter presented five questions:

- Have your institution formulated a development plan or a policy for flexible education/distance education?
- If so - could you please send us that document!
- Has any kind of organisational structure been created to implement the policy?
- If so – could you please send us a description of that organisation, its activities and the time plan it works after.
- Who can we consult for further information around the sent documents?

## Results

### Study 1: National policies

#### *Data gathering*

##### 1. Technical navigation

Searching the net through a search engine like Google <http://www.google.com/> using relevant key words in different combinations gave the following results:

- ICT, Policies, Education: 34 500 links (0.06 sec)
- ICT, Policy, Education 54 800 links (0.26 sec)
- ICT, Policy, Education, Nation 9 960 links (0.85 sec)
- ICT, Policy, Education department 29 400 links (0.29 sec)

It is clear that an enormous amount of text in this field is published on the internet, which now as a whole consists of more than 3 billion pages. The problem is not to retrieve the information, which takes less time than writing the key words down, but to identify the core documents for further studies. Another strategy must be applied.

##### 2. Social navigation

The second approach consisted of contacting key persons in the selected countries and to be guided through them to the relevant documents, sites or contact persons. This was done for the following countries: Denmark, Finland, Norway, Sweden and Netherlands. With this approach there was faster access to the relevant documents, but there were other problems in the selection of comparable material. These problems were related to the following aspects:

- **Language:** some policies are only available in national languages. In best cases there are a short English summary.
- **Format:** some links refer to printed reports to order. Originally we searched for full text

<sup>2</sup> Swedish Agency for Distance Education (Distum) was between 1999 and 2002 working as a change agent in higher education and in popular education. The agency has been replaced by two new agencies. The Agency for the Swedish Netuniversity supporting institutions on tertiary level working with web based courses and Swedish Agency for Flexible Learning being a change agent in the different institutions for adult education.

documents available via internet but some countries do not present their policies in that format. To include and order all printed reports would expand the study beyond the time limit.

- **Time span:** Some links refer to older policies. How old material should be considered in the study? The amount of material could also in this aspect expand to an overload. In some cases there is a radical transformation of policies over time – should that be considered or excluded?
- **Level of abstraction:** Some documents present very general and abstract aims and others state very specific aims. These visions are not really comparable.
- **One or several documents:** When the core site is identified there are often many policy documents of different kinds. How many should be included in the study?
- **Level:** The policies are sometimes general or geared towards different educational levels: schools, higher education, liberal education – should all or a specific level be included in the study?

The difficulties mentioned above made it necessary to use another source of current, structured and internationally comparable material.

##### 3. Eurydice as data repository

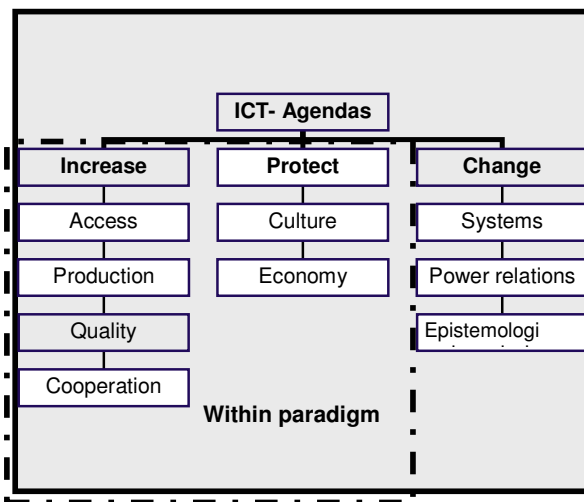
Eurydice European unit recently published the report *ICT@Europe.edu - Information and Communication Technology in European Education Systems* [21] The report compiles descriptive data from a survey about national ICT policies in 30 countries: 15 EU member states Belgium, Denmark, Germany, Greece, Spain, France, Ireland, Italy, Luxembourg, Netherlands, Austria, Portugal, Finland, Sweden, United Kingdom, 3 EFTA/EEA countries Iceland, Liechtenstein, Norway, 10 central and eastern European countries Bulgaria, Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, Slovenia and Slovakia. Also included is Cyprus and Malta.

In the 188 pages report there are national descriptions of the aforementioned countries. The descriptions are based on answers from educational ministries to a questionnaire about ICT and education. The ministries report on their 1) Aims and strategies 2) Sharing of responsibilities 3) Public/private partnerships and 4) Major initiatives implemented. The document provides a well-structured, relevant and current base of data. The information given in the report under the subtitle “Aims and strategies” is the material used for an interpretative analysis in this study.

#### *Data analysis*

**Inductive analysis** – An analysis was performed in order to understand what kind of aims the policies consist of. Further the ambition was to describe and organise these aims in a “theory”, based on the empirical statements, i.e. create a grounded theory. Policies of all 30 countries were studied. Each presented aim was categorised into overarching dimensions in a system of related concepts.

The following model and concepts were created to describe what the European policies consist of.



**Figure.** European ICT policies for educational systems. Content analysis of main themes.

The figure above summarises the content in all the policy documents in three general categories: Increase, Protect and Change. Under these categories are nine related sub categories: Access, Production, Quality, Cooperation, Culture, Economy, Systems, Power Relations and View on knowledge. The vast majority of countries express in their policies “more of different aspects” – these goals are categorised in the Increase category – this category summaries policy goals such as “increased internet access to all or to special groups”, “increased number of computers in schools”, “increased quality of education”, “increased production of digital content” and “increased partnerships between school and the private sector”.

These policy goals do not question the educational system and its structure – it is about increasing/ providing *more of* different aspects, but fitting this into the traditional system. This approach can be labelled “within existing paradigm visions”. This view is in contrast to a few countries in Europe that actually explicitly question the old educational system. Their national policies express radical transformations of the existing educational system, changes of the power relations between learners and teachers and a totally different view on knowledge, skills and competence. In these policies the knowledge society is mentioned as a society that is inhabited by people with new types of demands. That society demands fundamentally different skills of its members.

A small group of countries also mention the needs to take active protective measures in order to preserve their language, their historical and cultural heritage and guard the national work opportunities and economy in the process of standardisation and globalisation.

## Study 2: Swedish case

Out of the 49 institutions on tertiary level 43 answered (88%) and sent in a rather varied documentation. There were only eleven institutions with written policies. The documents were in many cases vague. 32 institutions stated that they were in the process of creating policies and 15 institutions declared that they had no intention to develop a policy at all. Thus in total only 22 % of the Swedish higher education institutions had a policy for implementing ICT in education. A significant lower number than was found in a comparable study in Norway, where 50 % of the institutions had developed a policy [22].

A content analysis was done on the existing documents. Eleven major analytic dimensions emerged from the texts. The arguments given for, or against a local institutional ICT policy was focused around these dimensions. The identified institutional reasons for change (or not to change) and strategic choices are abstracted in the following keywords/themes:

- Cooperation versus competition
- Local actions versus global actions
- Private actors versus public actors
- Distance students versus campus students
- Elite students versus masses /new groups
- Specialising versus broadening
- Financial strategies
- Image, status and reputation
- Political and societal demands/driving forces
- Technological opportunities
- Pedagogical objectives/aims

A few of the universities want to adopt ICT in education in order to gain a competitive advantage in relation to others. The strong universities with international brand names prefer not to disclose their visions and secrets to their Swedish competitors. They seek well-known international partners with high status. They also want to recruit elite students nationally and even globally. The smaller universities and university colleges with less known brand names are instead concentrating on their local regions and to reach large groups of students. They seek national cooperation to a higher degree than the strong universities.

The political system gives ambiguous signals – the Swedish universities shall compete for students and funding for research, developmental projects and education. At the same time: in order to get state funding, collaboration between universities is often a prerequisite. This “co-opetition” (cooperation and competition) can be observed also at the personal level – researchers shall compete individually and at the same time collaborate in teams. The balance between cooperation and competition is not easily established. This compete-collaborate strategy increasingly moves up to a global level. Many universities in Sweden have established their strategic global alliances and networks.

Another theme discussed in the policy documents was the competition universities now are facing from the private sector. How to establish private companies within the public university in order to get access to more money was also discussed. A new phenomenon in Sweden is the emergence of private firms associated to or created by the

strong universities selling education. Also lesser known universities and university colleges sell courses and education to new groups in society.

The Swedish policy has been to provide higher education for free in order not to exclude groups in society. At the same time the tertiary system works with a “numerous clauses”, a limited number of students can enter different educational programmes. The system with free education is now severely challenged: 1) the universities are successively less funded with public means, and 2) the demand from foreign students willing to pay is high. To “buy” an education/a degree as an individual is not allowed in Sweden – everyone shall compete within the framework of entry rules in order to get access to higher education and not compete with money.

A company, municipality or other organisation can on the other hand buy education for their employees from the universities. The entry system is circumvented by students creating their own private companies with the purpose to buy prestigious academic education for themselves. Also the creation of private sections in public universities reflects a mental shift in Swedish higher education politics and financing.

In the Swedish national policy the inclusion of non-traditional groups into higher education - disadvantaged social groups, people living in rural areas, adults starting university studies at an older age, immigrants, disabled people etc – has been a long tradition and a strong focus. These groups often require extra support and extra teaching hours, they often drop out and seldom are recruited as PhD students and researchers.

Politicians has promoted distance education in the past for these marginalised groups and flexible education, internet based education, e-learning in later years. But the time and effort needed from academics to meet the demands of these groups, the comparably low status and low pay at the universities have contributed to a slow progress in educational change.

## Concluding remarks

The motives for change in the Swedish institutions for higher education are, as briefly described above very varied. Many of the identified areas for institutional strategies are relevant also when discussing “university behaviour” in other parts of the world.

The national policies in the European countries are in some aspects focusing on rather different issues – some countries are radical and want fundamental changes of the education systems, but others want to keep the systems pretty much untouched just adding the ICT-component. A small number of countries also add explicit policy goals for protecting their language, history and economy that are perceived as threatened by the globalisation forces.

In the decentralised education systems in Sweden it is more or less presupposed that the development of the system is initiated and realised locally. As demonstrated in this survey few of the institutions had listened to the

voice of the government and acted accordingly. The academic leaders are guided in other directions and prioritize other things than the politicians. We know that individual teachers and researchers in those institutions out of own interest or in compliance with the national policy are developing and giving education supported with ICT and with flexible formats for the students. Without a local policy framework supporting their efforts their work in this area can be a brief exercise. The eventual conflicts between university autonomy and those needs in society best fulfilled by the universities, are issues that must be addressed.

The dominant values within academia direct activities towards excellence. This is embedded in the system on all levels. Success means to recruit the elite students, the best researchers and to be visible in the Nobel Price Committee. The connection between these values and caring for the societal goals is not direct. To compensate people for lack of education, to up grade work force and to cater for life long learning belongs to another world of values than the ones striving for excellence. Nothing says that activities aiming at fulfilling one set of values cannot be realised in the same system as activities fulfilling another set of values, but this must be brought out into the open and discussed.

It is believed that the identified problem areas are of general interest when discussing change processes in higher education institutions. The socio-economic and political contexts are necessary pre-conditions to be able to understand and compare the processes of change related to technology and globalisation in higher education.

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