INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) FOR INCLUSION

Sweden

1. Policy Frameworks

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1.1 Policies that impact on ICT for inclusion in the compulsory school sector

It is important to note that there is a division of responsibility between the Parliament, the Government and the municipalities or independent school owners. The Parliament adopts education legislation and decides on major school reforms and general curricula. A new Swedish Education Act (2010:800) came into effect on 1 July 2011.

The Government has overall responsibility for education and sets the framework, including national goals, regulations and national improvement initiatives for education. The Swedish Education Act constitutes the basis for all education from pre-primary to upper-secondary level, as well as the right to education for adults. Based on the Education Act, the Parliament, Government and/or National Agency for Education provide a more detailed framework regarding curricula, ordinances, recommendations and national development initiatives.

The municipalities are responsible for organising educational programmes in accordance with existing legislation. The municipalities also have the major financial responsibility for education.

To meet the challenges that exist both internationally and nationally, the Swedish Government wishes to make use of the opportunities offered by digitisation, and has therefore taken a decision called *ICT* for Everyone – A Digital Agenda for Sweden and proposed a new goal for ICT policy, namely that Sweden should become the best in the world at exploiting the opportunities of digitisation. On the subject of education the document states that:

School-children must, and teachers should, have access to modern learning tools that are required for contemporary education. Every pupil, on completing primary and lower secondary school, must be able to use modern technology as a tool for knowledge-seeking, communication, creation and learning.

ICT is one of the teaching tools needed by schools to achieve their aims. For more information, see: Ministry of Enterprise, Energy and Communications, 05 Dec 2011, *ICT for Everyone – A Digital Agenda for Sweden*. http://www.government.se/content/1/c6/18/19/14/70f489cb.pdf

According to the Government's Strategy for Disability Policy, the goal of ICT policy should be to make Sweden a sustainable information society for all, designed so that everyone can take part in the digital infrastructure, regardless of functional capacity. (See: The Swedish Government/Ministry of Health and Social Affairs (2011) En strategi för genomförande av funktionshinderpolitiken 2011-2016, http://www.regeringen.se/sb/d/14025/a/171269). According to the section Directional Goals for IT Policy, there should be an increase in the accessibility and usability of public

web interfaces. In addition, the knowledge and procurement skills surrounding accessibility and usability in connection with public procurement of e-services should be strengthened. The Government is investing in:

- a digital agenda for Sweden: a cohesive IT strategy (see above);
- e-administration: it should be easy for citizens and businesses alike to exercise their responsibilities and take advantage of administration services;
- public procurement and standardisation as a means of promoting accessibility and usability.

The objective of the investments is to make the most of technological developments in all social spheres, as a means of contributing to more comprehensive goals, such as sustainable growth and increased quality of life.

The Government has appointed 22 strategic authorities¹ with special responsibility for implementing disability policy. The Legal, Financial and Administrative Services Agency (Kammarkollegiet) and the Swedish Post and Telecom Agency (PTS) are two such authorities that have set up intermediate goals for achieving the directional goals of the IT policy.

In the section Implementation of the Disability Policy (see: Genomförande av funktionshinderspolitiken

http://www.skolverket.se/polopoly_fs/1.170904!/Menu/article/attachment/Redovisning2012_funktionshinderspolitiken.pdf), the National Agency for Education, the Swedish Schools Inspectorate and the National Agency for Special Needs Education and Schools put forth two common intermediate goals for implementing disability policy. These are intermediate goal 8 – 'There should be increased access to and knowledge of various learning tools, such as adapted teaching materials and digital tools' – and intermediate goal 9 – 'There should be increased knowledge among schools and their governing bodies as to how IT support should be designed to be accessible to all'.

The Government has given the National Agency for Education the task of promoting the use of ICT in pre-schools and schools (Government Decision 1:2, 2008). Based on the needs and conditions of the target group, the authority should spread knowledge regarding how to use and form ICT in learning processes, digital tools and learning examples in the field. The Agency should also promote communication with pupils and parents with the help of ICT and work to ensure safe use of ICT and the protection of personal integrity. There should also be a discussion on how to foster a critical approach to the information available through ICT. Another of the National Agency for Education's tasks is to assess the developmental needs of ICT use in pre-schools, schools and adult education and to make suggestions regarding possible improvements. There should be a special focus on teachers' use of ICT as a tool in education.

The National Agency for Special Needs Education and Schools (SPSM) also works to promote the use of ICT in education with the objective of inclusiveness. Its publication *IT in Education – To Achieve the Goals* (SPSM 2011) describes the opportunities provided by ICT in boosting learning. In the policy documents of the Swedish school, IT is highlighted as an important tool for learning in many ways. Digital skills are regarded as a central sphere of knowledge and IT is seen as a significant educational tool. In LGR11 (curriculum

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¹ The strategic authorities are: Arbetsförmedlingen, Arbetsmiljöverket, Boverket, Brottsoffermyndigheten, Domstolsverket, Försäkringskassan, Kammarkollegiet, Konsumentverket, Kulturrådet, Migrationsverket, Myndigheten för yrkeshögskolan, Post- och telestyrelsen, Riksantikvarieämbetet, Rikspolisstyrelsen, Sjöfartsverket, Statens skolinspektion, National Agency for Special Needs Education and Schools, National Agency for Education, Socialstyrelsen, Statens folkhälsoinstitut, Trafikverket, Transportstyrelsen.

for the compulsory school, pre-school class and leisure-time centre, see: http://www.skolverket.se/om-

skolverket/publicerat/2.5006? xurl =http%3A%2F%2Fwww4.skolverket.se%3A8080%2F wtpub%2Fws%2Fskolbok%2Fwpubext%2Ftrycksak%2FRecord%3Fk%3D2687), the National Agency for Education has given IT the status of an important component in learning for the future. The early draft document of LGR11 was based on the recommendations of the European Parliament and the European Council regarding key skills for lifelong learning.

The use of speech synthesis or e-books in reading, pictures as a support in writing and books gathered in one place in an e-reader or tablet are examples of supportive IT applications that help promote a good learning situation. It is the school's responsibility to ensure that pupils have access to modern educational tools in their learning. For children and young people in need of support, IT in the form of modern, up-to-date tools is often a prerequisite for good learning.

The text of the policy documents regarding modern educational tools and digital skills makes it necessary for the schools to also have the proper skills. All teachers in the schools of today and the future must know how education can be provided using IT and other up-to-date educational tools. All school administrators and IT departments must be able to provide the basis for such education in the form of time, organisation, skills development and technology.

Computers can sometimes be used as technical aids to prevent a disability from becoming an obstacle in schoolwork. Individual tests can be made to adapt the equipment to the pupil's needs. The county council disability centre, a regional computer resource centre or other bodies can help test and adjust the aid. The adjustments are made based on each pupil's needs, which means it is necessary for the school and the municipality to be knowledgeable about how the equipment works in the school environment and that it will give the pupil access to the internet, email and other functions in the school's network. The routines for personal technical aids vary significantly from one county council to another, for which reason each school should consult the council to find out whose responsibility it is to help pupils with personal technical aids.

1.2 Current policy on ICT for inclusion in relation to the main project themes

1.2 (i) ICT as a tool for promoting equity in educational opportunities.

The curriculum for the compulsory school, pre-school class and the leisure-time centre (2011) states in Section 1, *Fundamental values and tasks of the school*, that teaching should be adapted to each pupil's circumstances and needs. It should promote the pupils' further learning and acquisition of knowledge based on pupils' backgrounds, earlier experience, language and knowledge.

The Education Act (2010:800, Chap. 1 §4-§10) stipulates that the education provided in each school type and in the leisure-time centres should be 'equivalent', regardless of where in the country it is provided. National goals specify the norms for equivalence. However, equivalent education does not mean that education should be the same everywhere or that the school resources are to be allocated equally. Pupils' varying circumstances and needs should be taken into account. Some pupils should thus be given ICT tools, since ICT is a condition for good learning circumstances for them. There are also different ways of attaining the national goals. The school has a special responsibility to those pupils who, for different reasons, experience difficulties in attaining the goals that have been set up for their education. For this reason, education can never be the same for all.

It is stated in the curriculum that the school is responsible for ensuring that each pupil, on completing compulsory school, can 'use modern technology as a tool in the search for knowledge, communication, creation and learning'.

1.2 (ii) Access to appropriate ICTs as an entitlement

See answer to Q1: 'Schoolchildren must, and teachers should, have access to modern learning tools that are required for contemporary education. Every pupil, on completing primary and lower secondary school, must be able to use modern technology as a tool for knowledge-seeking, communication, creation and learning.'

According to the Education Act (2010:800), the municipality is responsible for carrying out education in accordance with it and other related laws and ordinances. The municipalities and the schools are free to determine the details of the activities, assuming that the activities adhere to the national norms.

According to the national curriculum, all compulsory education shall be organised in such a way that individual solutions are possible for all pupils. This is a way of strengthening the pupils' influence and personal responsibility, but also of taking into account all pupils' needs and individuality.

Any technical aid needed for the individual's everyday functioning is provided by the regional counties. Such technical aids in specific learning situations should be provided by each school.

1.2 (iii) Training of educational staff in the use of general and specialist ICTs

The National Agency for Special Needs Education and Schools coordinates the Government's support for special needs education. This entails, for example, training in the form of advice, courses, networks and conferences, as well as funding.

Since 2006, the Agency has been in charge of allocating funds for the development of resource centres at local level (i.e. municipal), commonly called *Skoldatatek*. These centres, which focus on giving support to children with reading disabilities and their teachers, are now established in more than half of all municipalities. After receiving initial funding, these centres become part of the municipalities' regular organisation and provide in-service training, evaluation of supportive technology and often the possibility for schools to borrow required equipment (see: *Sweden Country Report on ICT in Education*, http://cms.eun.org/shared/data/pdf/sweden cr 2011 final.pdf).

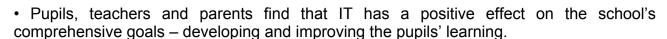
Skoldatatek are designed to give school staff support in choosing alternative tools and digital teaching materials. In addition to providing practical help on how to use the tools, Skoldatatek also help educate teachers about the connection of the tools with the policy documents regarding equal value and accessibility. Teachers can also receive technical support for the tools they borrow.

See also Q1 and task of the National Agency for Education in promoting the use of ICT.

1.2 (iv) The promotion of ICT research and development requiring a multi-stakeholder approach

Modern research demonstrates the many ways in which IT can be an important component in helping schools achieve more of their goals. Studies in Sweden and the UK show how head teachers, teachers, pupils and parents view computers as making a marked contribution to improved results. In a study entitled *eLearning Nordic*, 8,000 head teachers, teachers, pupils and parents in the Nordic countries were asked about the effects of using computers in school.

The study showed that:



- The effect depended to a great degree on how IT was used.
- The more IT was used, the greater the experience of usefulness.
- Basic learning skills like reading and writing are areas where the positive effects of IT are visible.
- Teachers see IT as a valuable tool in being able to offer education to all pupils.
- Girls and pupils with native tongues other than Swedish are dependent on learning to use IT in the school to a greater degree than other groups.
- According to the pupils themselves, they use computers more often outside school than at school.

1.2 (v) Data collection and monitoring in the use of ICT in inclusion

The Internet Infrastructure Foundation is responsible for the Swedish top-level domain and for developing the Swedish internet (https://www.iis.se/english/). In the Foundation's newly presented report Swedish /). In the Foundation's newly presented report Swedish /). In the Foundation's newly presented report Swedish /). In the Foundation's newly presented report Swedish /). In the Foundation's newly presented report Swedish /). In the Foundation's newly presented report Swedish /). In the Foundation's newly presented report Swedish /). In the Foundation's newly presented report Swedish /). In the Foundation's newly presented report Swedish /). In the Foundation's newly presented report Swedish /). In the Foundation's newly presented report Swedish /). In the Foundation's newly presented report Swedish /). In the Foundation's newly presented report Swedish /) in the Foundation's newly presented report Swedish /) in the Foundation's newly presented report Swedish /) in the Foundation's newly presented report https://www.iis.se/english/) in the Foundation's newly presented report https://www.iis.se/english/) in the Foundation's newly presented report https://www.iis.se/english/) in the Foundation's newly presented report <a href="

The report also shows how internet usage is on the rise and reaching increasingly lower ages:

Daily internet use has increased by almost 40 percent among schoolchildren in the first six grades. The increase has been especially noticeable among children aged 8-10.

Schoolchildren aged 12-15 are the age group with access to the greatest number of internet connections. Ninety-six percent have access to a laptop and 85 percent have access to an internet connection through a smartphone and/or a tablet.

Half of all 9-10-year-olds connect to the internet via their smartphone. Nearly as many also use a tablet.

Girls communicate with others via the internet more than boys do. They also visit social networks and publish pictures more often.

The 12-20 age groups are more inclined to watch/download videos, play games and avail of phone services via the internet. They are also more active than other age groups in commenting on what others have written, posting status updates and using microblogs like Twitter.

Nearly half of those aged 12-25 state that they often or very often spend too much time on the internet.

The National Agency for Education has been assigned the task of monitoring IT usage and IT skills every three years in the pre-schools, compulsory schools, upper secondary schools and municipal adult education. This is carried out through questionnaires to school administrators, teachers and pupils. In 2012 a pilot study was also conducted through qualitative interviews about IT usage and IT skills in special educational needs (SEN) schools and SEN upper secondary schools. The study will be published in 2013.

The Swedish Schools Inspectorate carries out quality inspections of the school system to help promote improvement by pinpointing important areas for development. During the years 2011-2012, teaching in the subjects of science, religion, Swedish (with a focus on the reading process) and physical education and health were inspected. All four inspections paid special attention to the use of IT tools in the classroom. Part of the investigation was to see if IT was used in a way that supported the pupils' knowledge development and if the schools had strategic policies for using IT in teaching.

1.3 Strategic plans for implementing policy on ICT for inclusion

See answer Q1. Strategic plans: *ICT for Everyone – A Digital Agenda for Sweden*, and the Government's strategy for disability policy.

According to the Swedish Education Act (2010:800), the municipality is responsible for carrying out education in accordance with it and other related laws and ordinances. The municipality and the school are free to determine the details of the activities, assuming that the activities adhere to the national norms.

In the decentralised Swedish school system, responsibility for ICT is shared. The role of the Government and its agencies is to promote the use of ICT in education, mainly by supporting the municipalities and independent schools in their tasks. The agencies promote the use of ICT in education by developing user-friendly ICT tools for in-service competence development and school improvement, as well as by encouraging the educationalists to increase their knowledge and competence. Follow up-studies are also conducted at national level every three years.

The responsibility of the municipalities/independent schools is to provide access to computers and the internet in schools as well as to ensure that practitioners, i.e. teachers, are skilled in using ICT as a pedagogical tool.

The responsibility at school level is to choose methods and means to achieve the overall goals of the Education Act, the curriculum and other policy documents.

Since 2008 there are three national school agencies: the National Agency for Education, the National Agency for Special Needs Education and Schools and the Swedish Schools Inspectorate.

There is no explicit national policy but in 2009 the Government entrusted the National Agency for Education with several tasks, including:

- knowledge dissemination about the use of ICT in the teaching and learning processes, and about digital tools and learning resources;
- support for the development of communication between schools, pupils/students and homes;
- monitoring of developments, research and other national and international studies;
- maintenance and development of the dialogue with all stakeholders, including other agencies, interested organisations, entrepreneurs and other parties involved in education;
- promoting the safe and critical use of ICT;
- performing regular follow-up studies.

1.4 Monitoring and evaluation of policies or strategic plans relating to ICT for inclusion

Although computers are used in the Swedish educational system, their use is limited in many subjects. The National Agency for Education has found that while it is not a goal *per*

se to increase pupils' use of computers in the classroom, there is considerable pedagogical potential in using IT in schools. The results of the follow-up indicate that this potential is often left unexploited and that the possibilities of using IT in the school could be expanded more than they are today. For several subjects, a low percentage of pupils said they used computers in class. Younger junior-level pupils use computers much less than older ones. At the same time, the results should be viewed against the background of only a few directly formulated goals in the curriculum and syllabuses regarding IT usage in the school. The follow-up shows that the self-evaluated computer competence of children, pupils and adult students is good. It is gratifying that young Swedes, both girls and boys, have good self-confidence regarding computer usage. The pupils also state that they have been taught to a significant degree to be critical as regards the information they find on the internet and to use the internet in a fair and decent way (IT-användning och IT-kompetens 2010, Report from assignment to follow up IT usage and IT competence in pre-school, school and adult education ſin Swedish]. See: http://www.skolverket.se/publikationer?id=2373).

1.5 Main policy developments in ICT for Inclusion that have taken place since 2000

It is difficult to answer this question as we could not find any specific description on this theme. The following quotation is taken from *ICT for Everyone – A Digital Agenda for Sweden* (mentioned above).

Let us, for a brief moment, turn the clock back twenty years. It was then, in the early nineties, that computers really started to enter Swedish homes. Before that time, people had to make do with an electric typewriter at best. The same situation applied at many workplaces. Several employees shared a computer or else there were secretaries who dealt with all the typing. More and more people then acquired a computer for their own use and were able to send one another digital messages.

It was not until around 1995-1996 that the Internet really made a breakthrough and the number of Internet connections started to grow. Carl Bildt (former Swedish Prime Minister) and Bill Clinton were the first heads of government to send one another email. In the same way, Sweden was a pioneer in mobile telephony and gained an extensive GSM network earlier than many other countries. Those days now seem a long way away, and no one could have really anticipated the development that has taken place in the meantime.

Sweden today is a leading ICT nation and holds a strong position with regard to both ICT use and broadband. For example, 6.3 million Swedes, or 91 percent of the population, had Internet access at home in 2010 and more than 99 percent had access to broadband. Nine out of every ten people use the Internet regularly, and 85 percent have a broadband connection. ICT is of great significance to the Swedish economy and makes a large contribution to the country's overall growth in productivity. It was estimated that between 2000 and 2005 as much as 33 percent of the rise in productivity in the private sector in Sweden could be attributed to ICT. However, ICT does not just contribute to economic growth but also to improving and simplifying everyday life for everyone – the public, businesses, organisations and the public sector, wherever one is in life or whatever one does.

The Government actively addresses ICT issues in several areas. It has, for instance, adopted the National eHealth strategy, a new Schools Act, syllabuses and curricula that clarify the need for digital skills, an action plan for e-government and an eGovernment Delegation, a Broadband Strategy for Sweden and a strategy for greater innovation in services.

1.6 Current issues in relation to ICT for Inclusion

The central issues are stated in the documents *ICT* for Everyone – A Digital Agenda for Sweden and the Government's Strategy for disability policy 2011-2016. Please see the answer to Q1. According to Handisam's report (2012) Hur är läget? Uppföljning av funktionshinderspolitiken (How are things? A follow-up of disability policy), there are still

major shortcomings in the knowledge of what obstacles users of IT and the internet experience and how they are affected by developments in IT policy. Studies of the accessibility of various services show that there is a good deal left to take care of. For participation in the IT society to occur on equal terms and to advance freedom of speech, freedom of expression and access to information, all sectors of society need to work on usability and accessibility in their e-services and web interfaces.

1.7 Important short and long-term developments in ICT for Inclusion

The following quotation is taken from *ICT for Everyone – A Digital Agenda for Sweden*:

In 2010 and 2011 the documents governing schools, in the form of a new Schools Act (2010:800), new syllabuses and a new curriculum for Swedish primary and lower secondary schools have been reviewed and clarified. The upper secondary school has also acquired new syllabuses, and a new qualification descriptor has been introduced for teacher and pre-school teacher training programmes. The new statutes are considered to provide what is necessary for digital skills among teachers, pupils and students. The way the knowledge requirements are formulated on the basis of established syllabuses and curricula has a crucial bearing on how these skills are provided, as well as for how the teachers put the instruction into practice.

Short- and long-term developments are always needed and many challenges remain before an ideal situation is reached. For in-depth information, please see *ICT for Everyone* – *A Digital Agenda for Sweden*.

2. Country Practice

This information was provided by Christina Szekely (Director of Education, the Swedish National Agency for Education).

2.1 Main developments in practice in ICT for Inclusion since 2000 in relation to the main project themes

2.1 (i) ICT as a tool for promoting equity in educational opportunities

Changes in the steering documents 2011:

New curricula for primary schools, compulsory schools for pupils with learning disabilities, special schools and Sámi schools. There is also a new curriculum for upper secondary level. ICT is now an integrated part of most subjects. Information literacy is pointed out as an important skill in the steering documents.

The Education Act (SFS 2010:800) (Bill 2009/10:165) has applied as of 1 August 2010 and contains the following new aspects:

The concept of 'learning tools' replaced what was previously called 'textbooks and teaching aids and equipment'. Pupils are to have, at no cost, 'access to books and other learning tools needed for a modern education'. The change was motivated in part by the rapid developments in information technology, which have significantly changed the way education is carried out and the equipment pupils use. The meaning of 'learning tools' was

defined as 'equipment and material, apart from books, that pupils need to achieve the goals of their education. Learning tools of this kind can also include alternative tools for learning, such as speech synthesis.'

The current curriculum (SKOLFS 2010:37) has been in place since autumn 2011. Under the section *Knowledge*, the document states that the goal for pupils upon leaving compulsory school is 'to be able to use modern technology as a tool for knowledge-seeking, communication, creation and learning', which replaces the earlier wording 'to be able to use information technology as a tool for knowledge-seeking and learning'.

2.1 (ii) Access to appropriate ICTs as an entitlement

The school is responsible for ensuring that each pupil, on completing compulsory school, can use modern technology as a tool in the search for knowledge, communication, creation and learning. In the decentralised Swedish school system, responsibility for ICT is shared. The role of the Government and its agencies is to promote the use of ICT in education, mainly by supporting the municipalities and independent schools in their tasks. The agencies promote the use of ICT in education by developing user-friendly ICT tools for in-service competence development and school improvement, as well as by encouraging the educationalists to increase their knowledge and competence. There are also follow up-studies conducted every three years at national level.

The responsibility of the municipalities/independent schools is to provide access to computers and the internet in schools, as well as to ensure that practitioners, i.e. teachers, are skilled in using ICT as a pedagogical tool. At school level the responsibility is to choose methods and means to achieve the overall goals stated in the Education Act, the curriculum and other guiding documents.

2.1 (iii) Training of educational staff in the use of general and specialist ICT

In its follow-up of IT usage and IT skills from compulsory school to adult education, the National Agency for Education asks head teachers about the extent to which the teachers at their schools have the competence to use and adapt programmes and/or alternative IT tools for pupils who need special support. The questionnaires have been sent off and the results will be presented in April 2013. Further training in IT, along with other in-service training, is the responsibility of the municipalities and individual governing bodies and schools.

2.1 (iv) The promotion of ICT research and development requiring a multi-stakeholder approach

No national initiatives for the promotion of ICT research have been initiated by the National Agency for Education. This is not within its remit.

2.1 (v) Data collection and monitoring in the use of ICT for inclusion

The Agency presents data and evidence relating to aspects of ICT use in schools through a website: www.skolverket.se/itiskolan. Commissioned by the Agency, Malmö University College monitors data and evidence in the area of ICT in schools.

2.2 ICT to promote learning in inclusive settings

2.2 (i) Country-based networks to support teachers in using ICT to promote inclusive learning

There are no government-based networks to support teachers in their use of ICT to promote inclusive learning in their teaching. There are, however, some non-governmental

initiatives and networks in the form of social network groups, including Twitter and Facebook.

2.2 (ii) Initial teacher education in using ICT to promote inclusive learning

Initial Teacher Education

The Higher Education Ordinance degree description (SFS 1993:100), valid since 1 January 2011, entails the following:

For all four teacher degrees, Pre-school Teacher, Compulsory School Teacher, Subject Teacher and Vocational Studies Teacher, graduates should show, through their 'skills and capacities', 'the ability to confidently and critically use digital tools in teaching and to be aware of the significance of the role of various media and digital environments in this area'. This replaces the previous 'show the ability to use information technology in teaching and understand the significance of the role of various media in this area'.

2.2 (iii) Practical support in classrooms to help teachers' use of ICT to promote inclusive learning

The National Agency for Education offers all teachers a skills development programme called PIM – Practical IT and Media Skills. It is a basic programme designed to give teachers elementary IT knowledge. (www.pim.skolverket.se) The National Agency for Special Needs Education and Schools and Skoldatatek (see above) also offer support.

2.2 (iv) Important information sources about new developments, hardware and software products and ideas for using ICT to promote learning in inclusive settings

SPSM: www.spsm.se

Swedish Institute of Assistive Technology: www.hi.se

2.3 Current obstacles to using ICT to promote learning in inclusive settings

In many cases, investments in IT equipment are not followed up by investments in promoting its usage in a way that would help IT become a support to teachers in the work of boosting all pupils' knowledge, development and learning.

School administrators do not actively manage the use of IT in the classroom. Schools often lack a comprehensive strategy for the use of IT in teaching.

The teachers' need to improve their competence in using IT tools in their work is not being met (see: *Skolinspektionens rapport 2012*, http://www.skolinspektionen.se/Documents/Kvalitetsgranskning/it/pm-it-iundervisningen.pdf).

2.4 Factors that support using ICT to promote learning in inclusive settings

The school administration plays a crucial role in supporting the promotion of IT usage in teaching. This has been emphasised in several Swedish and international follow-ups.

Teachers need to have good skills if they are to be able to use IT in a way that boosts pupils' learning. This applies especially when pupils are in need of alternative tools and programmes that place high demands on the teacher's ability to handle them and adapt them to the individual pupil's needs.

It is imperative for teachers to have both technical and pedagogical support if IT equipment is to be of any use in their daily work.



Many initiatives are in force and there is vigorous development in many municipalities. Investments are being made at both municipal and regional level. One-to-one campaigns in IT, which means one computer per pupil, have been carried out in many Swedish municipalities. Up to 20% of pupils have a computer of their own, which is especially advantageous to pupils with special needs or disabilities.