

Gender Awareness in ICT with Focus on Education.

Introduction

This paper describes the ongoing project Gender Awareness in ICT with Focus on Education. The first section of the paper presents the background to this study while the second section describes the pilot study carried out in April 2008 and outlines the preliminary findings. The main study will be carried out in Autumn 2008. This study is part of a larger project in the south-east of Sweden called “Young Communication” funded by the Knowledge Foundation and centred around three universities in the south east of Sweden: Blekinge Institute of Technology, Kalmar University and Växjö University.

Young Communication is a five-year project aimed at boosting the ICT competence among school teachers, university teachers involved in teacher training and teacher trainees. An important focus of the project is to support and facilitate an increased co-operation between pupils, students and teachers in terms of ICT technology. The project thus aims to realize experiences valuable for both Teacher education and school and may in this way provide several synergic effects in bridging the gap between formal and informal learning. Most of the project’s core work is carried out in thematic groups, initialized either by teachers, students or external partners.

SECTION 1

Background and contextual framework

It is widely accepted that the use of ICT will have a major influence on how learners approach learning, now and in the future. Curricula and teaching method are expected to change accordingly in order to meet the needs of the new and increasingly ICT competent generation. Observations and studies report on the new activities and habits of young people, elaborating on the overwhelming amount of ICT included in most young people’s everyday lives.

Currently, many educators in secondary schools and higher education are collecting information and bracing themselves with knowledge on how to approach the communication patterns of the younger generation. However, one essential aspect seems to be absent from the discourse; the possibility that these young people do not all behave, think and learn in the same way; that rather than having a generally ICT-competent generation, we have a generation with

many different ICT competencies. It would appear that currently our youth are considered as one homogenous group and projects and research addressing their ICT skills often fail to mention that there may be gender aspects which need to be taken into account. Possibly, since research has shown that ICT remains primarily a male sphere, efforts to deal with the needs of the new generation actually focuses on how teenage boys and young male adults behave regarding ICT.

Therefore, rather than assuming that all young learners approach ICT in the same way, and have the same background in ICT, it is crucial to study the ICT skills and behaviours of different groups of young people. Two groups that are particularly important to study are, arguably, boys and girls. Even the few schools that are keenly aware that there are differences between how the two genders use ICT seem unable or unprepared to resolve the situation. Furthermore, few studies in Sweden have attempted to map these differences and there is no official policy on how to address them. The rationale for the project Gender Awareness in ICT with Focus on Education is that although some aspects of behaviour in both gender groups are similar, we will find that other aspects are drastically different. As the “millennium generation” is entering schools right now, there is some urgency in examining ICT from a gender perspective. The gender issue is likely to have major implications for education and ICT in the future and order to ensure good communication between teachers and pupils, it is vital to have an understanding of how different groups may approach the use of ICT.

Previous studies

Some studies have shown very significant differences in the use of ICT with regard to gender. To briefly mention two such studies, it should be noted that according to Hou et al (2006), girls treated computers as a device to complete a task while boys considered computers as recreational devices. Thus, the study indicates that boys use technology for fun, while girls tend to use it as a means of communication. Another study by Erstad (2004) at the University of Oslo also observes that while differences in time spent on computers between girls and boys have lessened, the two genders tend to use the technology in very different ways.

Focus

With this background in mind, the project Gender Awareness in ICT with Focus on Education aims to identify how pupils use instant messaging systems, the Internet, down-load music, use

mobile phones, MP3 players, computer games (on and off-line) and video games etc. With the aid of a substantial, electronic survey, we hope to be able to identify the actual behaviour of these digital students and map out differences and similarities in the two gender groups. An additional aim with our survey is to find out to what extent pupils are happy with the kind of ICT teaching and guidance they receive from teachers and what they actually expect from teachers regarding ICT.

Goal with regard to teacher training

Following the analysis of our survey results, our aim will be to disseminate information to improve gender awareness in educators. These will include school-based teacher trainers, teacher trainees and university teachers involved in teacher training. In discussions with these groups, our intention would be to identify how teacher training curricula needs to address gender issues in ICT. Furthermore, by improving the awareness of educators regarding gender and ICT, we hope that educators will also discuss their own attitudes to ICT with regard to gender during the course of this project. After all, if there are, as we suspect, gender differences in the way students and pupils behave, it is highly likely that these patterns are also represented in teachers. Thus, there may even be a difference in how male and female teachers view the use of ICT in the classroom. Subsequently, our long term goal is largely addressed at increasing awareness of gender and ICT in education.

Disseminating information

The members of Gender Awareness in ICT with Focus on Education have regular contact with student teachers, school based teacher trainers and regular teacher trainers. After completion of the survey, the next step of the project is to conduct workshops and study days with student teachers, school based teacher trainers and regular teacher trainers where the results of the survey are disseminated. The focus of these meetings is both to help increase awareness and discuss means of how gender differences regarding use of ICT in the classroom can be addressed and perhaps resolved.

SECTION 2

Progress report

This progress report describes the work done so far on the project Gender Awareness in ICT with Focus on Education. It needs to be stressed that the project is at an early stage and that all

results are preliminary. The results outlined in this report come from our pilot survey and are therefore not conclusive. The main survey will take place early Autumn 2008.

Method

During Spring 2008, a pilot survey was formulated and member checked. The survey included a large number of statements and questions related to the daily habits of the young people and their use of many aspects of ICT including the Internet, mobile phones, video games, computer games, online games, word-processing, downloading of music and film, chatting, blogging, instant messaging and community site participation. Moreover, there were statements about their experience of the ICT support they received from teachers in school and how they saw themselves as users of ICT. For most of the statements, respondents could choose from four possible responses, allowing them to “strongly disagree”, “agree to some extent”, “agree for the most part” or “totally agree”. In questions related to the types of games played and on which hardware, a list of the most popular games were given where pupils could select a maximum of 3 games which they played the most. The same type of question was posed regarding use of community sites.

Selection

We approached two schools and received permission to carry out a pilot study in April 2008. The pilot involved one class of 15 year olds and one class of 17 year olds with a total of 33 respondents from a possible 50.

Results

The results from the pilot study showed several interesting tendencies that tend to corroborate previous research. It also provided us with important insights into how we should approach the main study. Below is an outline of the most significant findings.

Response to questionnaire

More boys answered the questionnaire than girls which alerted us to the fact that we need to make special efforts to encourage as many as possible to complete the questionnaire. However, this figure in itself could be significant from the point of view that although we believed all pupils had equal opportunity to complete the questionnaire, some girls may not have had either the prerequisite ICT skills, or the computer hardware, necessary to answer the questionnaire.

Access to computer and internet at home

Sweden has a high ratio of home computers and most of these are connected to the internet. Although all students who replied to our questionnaire had a computer and internet connection at home, some of those who did not answer the survey may not have had this.

Gaming

For these questions we were especially careful not compound gender stereotyping about gaming and thus ensured that questions were posed in a neutral manner. We listed a variety of today's most popular games and asked students to select a maximum of 3 which they played most. In this list we included non-violent role-playing and management games like The Sims, social music games such as Guitar Hero and Singstar, online multiplayer games such as World of Warcraft and first person shooter games such as Counter Strike and role playing games. Furthermore, we asked these questions in relation to the type of console used or if they were played on a computer. Predictably, we found that large numbers of males tended to play action type games and that the more social kinds of games were more common among females. It was also apparent that the boys used a greater variety of consoles to play on and the majority of girls who played games tended to play those on the computer. More of the boys seemed to use a variety of the 9 consoles we listed. In the main study, we will pose questions on family constellations to get an indication of the importance of sibling or parent influence on the use of ICT.

Support with ICT in school

In an attempt to gauge how pupils experienced the support they received in school regarding ICT, we posed three statements. The first was, "I think my teacher teaches me a lot about how I can use the computer in my school work". The response can be viewed in Table 1.

Table 1.

| | Boys | Girls |
|-------------------------|------|-------|
| strongly disagree | 32% | 60% |
| agree to some extent | 36% | 30% |
| agree for the most part | 14% | 10% |
| totally agree | 18% | 0 |

A second statement related to the Internet was: “I think my teacher teaches me a lot about how I can use the internet in my school work”. The response can be viewed in Table 2.

Table 2.

| | Boys | Girls |
|-------------------------|------|-------|
| strongly disagree | 14% | 40% |
| agree to some extent | 55% | 10% |
| agree for the most part | 18% | 50% |
| totally agree | 14% | 0 |

These two tables indicate that the girls who were a part of the study experienced that the support they received in school regarding ICT was less adequate than was experienced by boys. We will probe this area more thoroughly in the main study.

The third statement in relation to ICT in schools was, “I think that my teachers are good at computers and the Internet”. The response can be viewed in Table 3.

Table 3.

| | Boys | Girls |
|-------------------------|------|-------|
| strongly disagree | 18% | 20% |
| agree to some extent | 55% | 60% |
| agree for the most part | 23% | 20% |
| totally agree | 5% | 0 |

This table shows that boys and girls had similar views on the competency levels of their teachers. However, it is significant that all of these young people do not seem to have a lot of confidence in the ability of their teachers in relation to ICT.

Are girls or boys better at computers?

We posed two statements regarding what girls and boys thought about each other. The first statement was, “Boys are better than girls at computers”. The response can be viewed in Table 4.

Table 4.

| | Boys | Girls |
|-------------------------|------|-------|
| strongly disagree | 14% | 20% |
| agree to some extent | 23% | 50% |
| agree for the most part | 32% | 30% |
| totally agree | 32% | 0 |

The second statement was, “Girls are better than boys at computers”. The response can be viewed in Table 5.

Table 5.

| | Boys | Girls |
|-------------------------|------|-------|
| strongly disagree | 59% | 30% |
| agree to some extent | 41% | 70% |
| agree for the most part | 0% | 0% |
| totally agree | 0% | 0 |

Here we can see that not only did boys think they were better at computers but there is a tendency that girls held the same opinion.

Conclusion

The pilot survey was conducted to hone our questions and test the electronic survey software. Since the group of pupils the survey reached was small, the results have to be considered inconclusive at this stage. At the same time, they seem to agree with previous research and they certainly suggest that the gender issue in relation to ICT must be thoroughly explored. If the tendencies revealed in this study are confirmed by the main study, gender is a crucial factor that must be considered by every teacher involved with ICT in schools.

As described, the next step of the project is to conduct a full study in Autumn 2008. This study will target a significant number of upper and lower secondary schools in the south east of Sweden.

References

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