

Summary of the Survey “Pupils’ Voices“ Germany

**“Pupils’ Voices“: Information and Communication Technologies in Education,
*December 2005***

Why “Pupils’ Voices”?

Research in the area “Learning with New Media in School Education“ has until recently mainly focussed on the teacher perspective: teaching methods, needs for further training, media-educational concerns and similar questions stood in the forefront of discussions. By contrast, the examination of new media education from the perspective of school girls and boys and considering their own views, was not looked at sufficiently by researchers.

This survey was carried out with the intention of documenting the effects that information- and telecommunication technologies (ICT) have in the classroom by letting pupils’ voice their own experiences and expectations of learning with the new media, particularly regarding the use of the internet.

It will therefore be examined how the adolescents view the context and conditions that shape their learning with ICTs, and evaluate how confident they feel when dealing with the new media and how – from their point of view – teaching practice as well as the teacher performance has been altered by the deployment of new media etc. We will be able to draw conclusions about how computer-assisted learning impacts on the development of new learning processes by pupils and also ascertain what schools’ needs are in this regard.

This research is a joint British-German project, but this does not necessarily imply that results are directly comparable. Groups of pupils of similar age in both British and German schools were questioned about their views and opinions. The research was co-ordinated by Sue Brindley of the Faculty of Education at the University of Cambridge (UK). The Cambridge team studied English schools, while the situation in German schools was examined by a team led by Prof. Dr. Wilfried Hendricks of

the IBI (Institute for Education in the Information Society) at the University of Technology in Berlin. Cisco Systems commissioned the research.

Methodological Design

IBI adapted the evaluation that was designed by the Cambridge research team to fit German conditions. The different structures of the German and English school systems posed particular challenges in this regard. The variety of school types and differences rooted in a federal education system suggested that this pupil-oriented study should be designed as a more explorative evaluation. Less emphasis was therefore put on a sample that was representative of all the various school types and different regions. The study looked at the experiences of pupils in

- ten schools, selected from rural, urban and metropolitan regions of five “Bundesländer” (German Federal States). These were Berlin, Brandenburg, Hesse, Mecklenburg-Pomerania and Lower Saxony.
- In each case, the technical equipment of half the schools was above average and the other half below average.
- The evaluation was carried through at different types of secondary schools: Gymnasium (grammar school), Gesamtschule (comprehensive school), Hauptschule (secondary school), and also included schools with afternoon care.
- In each school, two group discussions with approx. 8 to 10 pupils aged between 12 and 14, as well as between 14 and 16 were carried out (duration approx. 1 hour).
- The individual group composition was heterogeneous, and pupils were selected in consultation with the relevant teachers in the various schools:
 - approximately the same number of girls as boys
 - even distribution of age groups
 - media competence: both skilled and lesser skilled computer and internet users.

The empirical base of ten schools in five federal states is not representative and therefore the results derived from this study should be regarded as explorative and as an indication of trends. The results are however reliable and consistent with results of comparable studies.

Summary

The research project “Pupils’ Voices” makes important contributions towards current debates about the role that information and communication technologies (ICTs) should play in schools. There have recently been controversial debates in which the benefits of computer supported learning were called into question, and this study allows the contrary and corrective views of those who are most affected to be heard, namely the pupils.

Pupils’ subjective impressions and opinions were at the centre of this research project, and these turned out to be extraordinarily nuanced and differentiated. Adolescents call for IT-competent teaching staff, and would like new media to be more integrated into classroom teaching, in a manner that goes beyond simplistic internet searches.

Networked learning depends on an appropriate investment in technical infrastructure, but teacher training and a sense of optimism and a “can do” attitude are equally necessary in order to achieve a renewal of the culture of learning and teaching in state schools.

Further Results:

➔ Digital media are used in all schools and all pupils have experienced IT in teaching. There are opportunities to integrate new media into all subjects and at all levels. Thus far their use in education has been too sporadic, unsystematic and dependent on the enthusiasm of individual teachers. Many teachers use IT in only a limited way, and in this way miss opportunities to boost learning performance.

- ➔ Schools are mostly still locked into the conventional computer room model which prevents all-round pupil access to IT, and also limits a more natural use of new media in class.
- ➔ The expectations of pupils with regard to educational computer use are consistently very high. The opinions voiced in the interviews show that pupils see more advantages than disadvantages in new media, but are also aware of the dangers of uncritical classroom use. Pupils are very interested in using new media educationally, and have many of their own ideas on how this could best be achieved. The use of ICTs in schools is however more an exception than the rule. No pupils reported the use of new media in a more sustained class project. Specialised educational software is employed infrequently, although pupils reacted very positively to their use. Instead, teachers mostly only use computers to access the internet for reference purposes. Films are not at all distributed via the net; insufficient data projectors in schools are cited as a reason.
- ➔ Pupils' experiences of using digital media in class are often disappointing and lag far behind their expectations. This dissatisfaction is not only related to the digital media themselves, but also to the conduct of teachers. Pupils expect teachers to adopt more the role of an advisor who would be able to guide them through the learning process.
- ➔ According to the teachers who are also their schools' system administrators, the successful use of IT in class requires a role change of teachers: from teacher to learning partner. But very few teachers are able to integrate computer use effectively into the curriculum. Pupils are aware of these deficiencies and exploit them by channelling their efforts into non-educational activities. Many pupils report classroom situations in which they had opportunities to play games or visit chat rooms. It is quite revealing that pupils actually criticise this behaviour as undesirable. It is clear that pupils are very much able to evaluate the effectiveness and meaningfulness of educational IT use, and therefore call on teachers to be better prepared.

- ➔ Currently, in many schools, the dominant attitude of teachers is that hardware and software skills should be acquired “on the side”, or that such knowledge needs to be developed privately. This attitude results in very divergent levels of computer skills in a class. *If one were to transfer this situation to another culturally acquired skill, for example reading, the problems become very evident: if a section of a class were not able to read, written input, such as in the form of a worksheet, would not be able to reach everyone. Conversely, those advanced pupils who already were able to read fluently, would be bored if the beginners were to be taught the elementary skills.* In the interests of effective digital media use in schools, we therefore call for an educational model that guarantees a higher degree of uniformity in respect to pupils’ computer skills.
- ➔ Pupils’ computer skills are strongly related to the availability of PCs at home. Most pupils have access to PCs and the internet at home. The provision of digital media access in schools is however very important for a significant group of pupils whose homes have no computer equipment. In this way “digital gaps” in society can be closed.
- ➔ Using a computer or using the internet is regarded by pupils as synonymous. At home, computers are preferably used for entertainment purposes. Boys favour games whereas girls mostly prefer to use the communicative functions of the internet such as e-mails or chat rooms. The best and most engaged pupils insist that they would not want to study anymore without utilising internet research and taking advantage of other online resources. For pupils, networked learning is no longer a matter for the future; it is already current practice and informal learning appears to gain increased importance.
- ➔ The currently practiced teaching method, namely that pupils are left to work more or less independently without any instruction or guidance, is criticised by pupils. Working with new media is primarily thought by teachers to save time and effort, rather than being an opportunity to change conventional teaching practice. Pupils therefore demand appropriate training and skilling of all

teaching personnel which would not only cover competence with regard to hard- and software, but also deal with the educational implications. In order to achieve more effective and meaningful computer supported education, teachers need to become aware of different models of teaching, which would inevitably change their conventional roles. There is evidently no key conceptual plan that would co-ordinate the overall learning process. Pupils' educational levels are therefore inconsistent and teachers are not able to assess their needs. This poses the danger of either under-challenging pupils or demanding too much of them.

- ➔ A more up-to-date culture of teaching and learning, in which pupils are able to control their own learning processes, is dependent on new educational methodologies. These need to be implemented by competent teachers, and with support of appropriate technologies. In this regard digital media need to be integrated in such a way that the specific needs of pupils are targeted in an effective manner.