D3 School portrait of the De Bosrank primary school in Zingem (East Flanders)

www.gbz-de-bosrank.be
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1 General characteristics of the school

Zingem is an agricultural municipality situated to the north of Oudenaarde.
This community school is located at Kerkplein 24 in the middle of the village. The name 'De Bosrank' (which in English means 'forest tendril or shoot') reflects the school's aspiration to help as many children as possible to develop and grow in education. The use of computers is an integral part of this.
This primary school is part of the public-authority subsidized education system and falls within the jurisdiction of the local government, which forms the school board. The school provides primary education for around 279 children, 89 of them distributed over three nursery classes and 190 over six age groups on primary level. The children are grouped into classes based on the year's educational content. The first and fifth years have parallel classes.

The children come from the immediate surroundings and represent all levels of the local community. In the past three school years, the number of pupils on primary level has risen constantly, while the school population has remained stable in the pre-school department.

The team consists of twelve women and eight men. More than half of the team have worked in the sector for more than fifteen years. The Head Teacher has worked in education for 32 years, and for 12 years in her current job. She has a number of qualifications relevant to her position as Head Teacher.

By attending educational seminars and following continuing-education courses – including courses on ICT – the educators are building up a level of expertise that can be of benefit in the classroom and/or in the school as a whole.

History of ICT at the school

The school has played a pioneering role in ICT. In 1983, a group of friends purchased ten (MSX-type) computers and converted one of the classrooms into a computer room. They set up a savings scheme that enabled them to purchase several software packages. These were limited to geography and biology, which the fifth and sixth classes used sporadically.

In 1992-1993 the school purchased two new computers for the Management and the secretariat departments to deal with the school administration, pupil management, invoicing and correspondence.

During the 1995-96 school year, the computer room was relocated to a media room. A 486 machine, a printer and the school's first connection to the internet were added to the existing computer configuration.

During a working visit to Sweden in 1996, the school managers became convinced of the added value of using computers in the classroom. The school immediately purchased another five PCs and encouraged their integration in the lessons.

On condition that it would work together with a partner school and maintain an alliance with other schools, the school submitted an internet project to the Flemish Community in 1997, titled 'From automation to information' ('Van automatisering naar informatisering'). The school again invested in new hardware, and six classes were each allocated their own computer.

Based on its participation in the 'Digikids' project, the school built its own website in 1998. In the same year, the *King Boudewijn Foundation* ('Koning Boudewijnstichting') asked the school to take part in the 'Rivers project' ('Rivierenproject'). From the following year onward, work was carried out systematically to expand the numbers of computers at school. The PCs were connected to a network and the analog telephone line was replaced by a faster ISDN connection. The school currently uses an ADSL line.

During the 2002-2003 school year, 'De Bosrank' was an experimental school for 'Digimap' (Wolters-Plantyn Publishers). All the class administration, such as the class book, the Cito (National Institute for Educational Measurement) tests, pupil evaluations and reports, were recorded on the computer.

In 1999 and 2001, delegations from Cuba and Vietnam paid study visits to the school to study the role of computers in the learning process.

Annual costs

According to the Head Teacher, the annual fixed costs for ICT are around € 1250. When the purchase of all kinds of software and/or other necessities is added to this, the actual annual costs come to around € 5000.

Educational vision and ICT

By including ICT in the school working plan, the school hopes to give the pupils the opportunity, based on the use of technology, to develop lifelong attitudes to learning that will enable them to become productive citizens in a global information society.

By using technology as a tool, teachers, school managers and secretariat employees will be able to work more efficiently and contribute to a more effective and better-managed learning environment.

Objectives

a. Pupils

By using the technology as a tool, the pupils learn to:

- expand their knowledge
- think critically
- solve problems
- make decisions
- find information and analyse, evaluate and communicate it efficiently
- work in a heterogeneous and safe environment in an ethical, responsible, independent and co-operative way.

b. Teachers

By getting pupils to use the technology as a tool and helping them to do this, teachers can:

- improve their educational strategies, achieve better study results and reduce the gap between pupils who perform well and those who perform badly
- evaluate and follow the progress of the pupils accurately and efficiently, and report on their progress to their parents
- permanently refine their professional competence base through self-development with the technology and by sharing knowledge and tools with colleagues.

c. The school board

By using technology as a tool and promoting its use, the school board can:

- anticipate, search for and apply for specially-adapted funds, maintenance, support, training and equipment
- highlight the leading role it plays, as well as its vision regarding the use of technology in promoting the study results of pupils and the productivity of personnel
- integrate the technology into its procedures and guidelines.

Committed learning

The current computer and telecommunication technologies are powerful tools that can be used to support committed learning. More concretely, they provide opportunities to:

- learn in an authentic, project-oriented and investigative way
- gain access to sources of information around the world
- promote the interaction between pupils, teachers and the worldwide information society
- change the classical role of pupils and teachers.

Use of the web as lesson material

Teachers who want to use the internet as a tool when giving lessons must:

- learn to evaluate good websites on the basis of selectivity, reliability, quality, organization, questions, instructions and succession of activities
- use measurable objectives and involve ‘online’ activities that support the achievement of those objectives

- treat lessons as an adventure
- use web lessons that are aimed at developing the skill of solving problems and that encourage pupils to look for and collect information
- bring pupils in contact with useful and valuable topics that will motivate them to learn
- teach pupils to investigate and explore
- teach pupils to surf on the internet, scan material and disregard or remove irrelevant information
- encourage pupils to develop their own insights when reading and evaluating information material on the internet
- place study pages on the school's website, with a summary of good information sources and tips for study activities.

Hypertext requires a new reading strategy

- hypertext must be read differently to linear texts
- pupils must acquire a new type of reading skill, a skill based on associative thinking, with an understanding of the logic used by web managers. This skill also has a technical side to it. Pupils must recognize all references in the text so that they can navigate as smoothly as possible.

Summary

The use of PCs, ICT and the internet at the school is a social activity and an interactive process during which people ask each other questions and stimulate each other in a group, experience group processes, and therefore also build up social assertiveness. After all, it is not the computer and its technology that play the central role, but the group experience. Not the lesson material, but the pupil.

ICT plan

There is as yet no formally recorded ICT plan. With the arrival of an ICT co-ordinator, a general ICT policy plan with a learning line will be drawn up in co-operation with all schools in the comprehensive school system. After discussions with the school team, every school can graft that policy plan onto its own specific needs and insights.

In anticipation of an ICT policy plan, the team is presently aiming for the maximum integration of computers as didactic and remedial tools. In nursery education, the school is limiting its objective to practising the mouse skill and familiarizing the children with the medium using such tools as memory games.

At present, one of the teachers is holding an internal refresher training course for his colleagues two nights a week.

It is expected that the ICT co-ordinator will supervise the teachers in technical matters.

The infrastructure

The school has an up-to-date summary of its hardware and software. In the computer room, there are 11 PCs, 4 with 64 MB RAM, 2 with 48 MB RAM and 5 with 32 MB RAM.

Except for one 486–100 MHz, all of the other machines are Pentium. The monitors have a resolution of 800x600 pixels. There is a laser printer that everybody shares. Just two computers have speakers.

All of the classrooms have at least two PCs. These are mostly Pentiums with a full configuration.

The software corresponds closely with the methods or the educational learning packages. Application software such as Word 97 and PowerPoint are installed on almost all the computers. Educational software packages include those for Dutch and a second language, mathematics, world orientation and music. There are also packages with reference works, edutainment, 'online software' and educational websites.

2 Changes for pupils

During the learning process, the pupils acquire computer skills in a relaxed and playful manner. This is some compensation for those children who do not have such a machine at home. A survey has shown that just one-third of the school population has a PC at home.

Due to the integrated use of the computer in the didactic process, the pupils not only become proficient in using that technology but also in searching for information. 'Internet à la carte' allows the pupils to accurately find and process specific information in a secure environment.

In the sixth year, the communicative aspect is given every chance in the form of the pupils' own daily or weekly index. On their web log, which the pupils keep up-to-date themselves, they briefly sketch events and initiatives for their website visitors using text and photographs.

Because the website contains many repetitive and/or extension exercises (practice at home!), all the pupils get the chance to practice lesson materials at their own pace and level. This is an extra stimulant to 'learn how to learn'. This option is also being given an extra stimulus in 'hoekenwerk' (corner work).

New computer users can brush up on all kinds of computer terms using 'mouse language', where explanations for words and terms are also explained in sample sentences.

At this school, the use of the PC gives added value to different facets of day-to-day learning in the classroom. Social skills, technology, society, the use of sources, music (media) and language (writing) are made to naturally form a cohesive whole.

3 Changes for teachers

In the first place, the use of the computer by all teachers for managing the class administration is a great achievement.

In the first-line support and the support-wide work at classroom level, adapted software that is compatible with the method is used for pupils who are behind in technical reading. This supplementary and remedial approach helps children to read better. In consultation with the parents, level differentiation is incorporated in the same way for risk-category pupils or for children with learning difficulties.

Due to the automation of the student tracking system and the advances based on test results, the learning benefits can be recorded on both class and school level.

Using the network, it is possible to download programs from the central computer to the classroom. Not all of the teachers have that skill, however. An experienced teacher with sufficient ICT knowledge and experience is supporting and training his fellow team members to do this.

All kinds of output data is systematically stored and updated. That makes it possible to quickly trace and correct knowledge gaps after pupils' performances have been evaluated.

4 Organisational change

All hardware is managed and maintained by the ICT co-ordinator. The team members themselves are involved in selecting the software, guided by reviews and/or descriptions in brochures or magazines. Experiences and evaluations are then discussed in the team. During integrated working weeks, such as classes in the open air or on field trips, the internet is used for communication with the home front or for sending back reports. When preparing projects and extramural activities or editing them later, the PC is used intensively to collect information.

The use of the computer in the educational process requires a certain level of adjustment among the teachers. In order for that approach to have the full benefit, teachers will have to adopt quite a different teaching style. Integration will not be as fast for teachers who continue to use the classical teaching style. One striking point, however, is the way the team members can influence each other. This again is proof of the school's élan in the field of ICT.

5 Changes in co-operation with the environment

Initiatives taken by the circle of friends are giving the school a lot more financial scope. As a result, the school is systematically working on expanding its hardware. For example, parents can tell the school which companies in the area are about to replace their old computers. The old machines are still more than adequate for the children. In addition, the municipality (school board) is prepared to provide and/or support essential necessities. That can involve either an extra purchase or paying back the fees for continuing-education courses.

The parents are open and positive about the evolution of information and communication technology at the school. Grandparents who live far away and cannot experience some of the activities from close by are very enthusiastic about the way they can keep informed about the school lives of their grandchildren through the school's website.

6 Reflections and ambitions

Looking back at the development process of the past years, the school is very happy that it boarded the (express) train when ICT started to take off. The most significant bottleneck involves the hardware that was purchased at that time. During the initial phase, the school invested heavily in hardware. The technology then suddenly evolved so quickly that the entire configuration soon became obsolete. School managers note that at the time the school should have spread its purchases more efficiently. If the school had bought the hardware more gradually, it would have been able to acquire more options for the same price. A second, essential remark refers to the then lack of a team vision.

The Head Teacher believes that the challenges for the future are to:

a. keep motivating the individual teachers
b. make sure that there are several pioneers who will stimulate the team, because there would be less impact if school managers did this. Teachers are more open or susceptible to new ideas when those ideas are put forward by colleagues. It is therefore necessary to delegate authority on that level.
c. All teachers must have the basic skills. These must be imparted to them and supervised on the basis of their own competencies in the team.

The fast-paced evolution in the ICT landscape is experienced as a bottleneck. Software packages require increasingly extensive or advanced configurations. Given the budgetary scope of a school, it is not possible to constantly keep up with that evolution. It is therefore necessary to choose certain objectives. What does the team want to achieve with ICT at class and school level? People must be clearly aware of the answer to this question.

7 Lessons for others

- Schools should not begin too hastily. They should first formulate an ICT vision, set down objectives and draw up a long-term policy plan. The best way to concretize this is in a systematic and well-considered way so that everybody can become familiar with the medium.
- It is important that a number of motivated and interested team members at the school are willing and able to take the lead. School managers can delegate a certain authority to promote this.
- The integration of ICT on the class floor is not matter-of-course and is based on a gradual process involving ups and downs. It requires a change in mentality and a turnaround in teaching style. The main message is: 'Don't give up'.
- Contact with schools that have already acquired some expertise is recommended.
- Hardware should be purchased gradually, in line with the objectives and based on a long-term vision.

8 Assessment

De Bosrank was one of the first schools to join the revolution in modern media and technologies. Step by step, remaining alert to changes and improvements, the school has continued to follow developments at its own pace. Under the leadership of a motivated management team and several pioneers, the ICT process was expanded systematically, both at school and classroom level. For most of the teachers, that has not always been matter-of-course. Based on that pioneering role, the school has built up quite a high level of expertise and a very good reputation.

In all classes and on a daily basis, computers are integrated to the maximum into the didactic activities. Some teachers can do this more successfully and faster than others. New teachers are trained and supervised by the school promoter.

In addition, the feeling that everyone is in the same boat is stimulating an attitude of mutual support and is encouraging people to talk to each other about their positive experiences, problems and difficulties.

The expertise gained is now being tapped by external bodies such as teacher training colleges, for example, but also local schools. In the comprehensive school system, this school, with its competencies, can take the lead in opening new avenues and fulfilling an exemplary function and a supportive role.

Within the framework of its obligation to achieve results and be good teachers, the team continues to work hard in its chosen area.