A French Primary School

Les Réseaux Buissonniers

Signed by François Bocquet and Hélène Godinet, a yellow flyer was distributed at the "Learning in the Information Society" Conference organised by Mme Cresson (Brussels, 16-17 December 1996). It presented the initiative called "Les Réseaux Buissonniers"[1] and I think better to keep their words to understand both the institutional framework of the initiative and the objectives that are foreseen through it. To the question "What are the Réseaux Buissonniers?" they answer[2]:

- *In the spring 1994 when the Education Nationale, the Conseil Régional Rhône-Alpes, the Conseil Général de l'Isère et de la Drôme and the Parc Naturel Régional du Vercors united their wills, means and competencies to implement the **Charte pour la Qualité de l'Ecole dans le Parc Naturel Régional du Vercors**[3], a charter which has been signed in the presence of the Minister of Education in July 1994.*

- *A pedagogical **experiment of networked collaborative work**, which is working since December 1994, with the support of the DATAR[4]. This project is part of the global on **seeking opportunities** induced by ICT in rural areas: **Vercors-Connect**.*

- *More than **90**[5] **sites** that are concerned:*

- 80 classrooms of schools in various communes of Vercors (Drôme and Isère),

- the Documentation and Information Centres of all the colleges of the area,

- the territorial Inspections of the National Education Ministry,

- the IUFM[1] of Grenoble

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[1]   In French "faire l'école buissonnière" means for a pupil to hide behind the bushes instead of going school that is to play truant.

[2]   Although this translation is in many respect "free", bold characters are in bold in the original flyer.

[3]   The "Charte" is presented below in a box.

[4]   The DATAR is the French ministerial Delegation in charge of Territory Planning and Regional Action.

[5]   It is now, six months later the issue of this document, about 140 sites that are concerned by the initiative.

- the Regional Natural Parc of Vercors,

- the District of the Villard-de-Lans plateau and the community of Vercors,

*- Consultants of the **Espaces Métanoïques** Company and many other partners.*

• *Based on hard and soft **configurations**:*

*- Apple Macintosh Performa computers adapted to **multimedia** applications, equipped with a CD-Rom driver, a high speed **modem** and a printer.*

*- **Lotus Notes**, a software which enables group-work at a distance.*

*- **Servers** systems which will receive more than 200 different users.*

• *A **communication architecture** which is made up at the moment with two entries (a "teachers' entry" and a learners' one), and offers various Bases and Fora: e-mail (each partner has a personal mailbox), Base for training follow-up, Base for pedagogical exchanges, Diary, ...*

• ***Learners** are communicating, sending letters the ones to the others, small ads, writing poems, technical descriptions, newspaper articles, combinatory tales; learners who understand that work can be performed at a distance and cooperatively, who everyday are writing, drawing, individually or collectively, for the other learners, "for real", sending and reading messages...*

• ***Teachers** who are communicating, exchanging contents and methods, sharing resources, proposing meeting, initiating or continuing reflections, discussing their pedagogical practices...*

• *The follow-up of **distance training**: it enables also the teacher **to get information**, to access a variety of documentary resources. Links with the IUFM and the CDDPs[2] enable teachers to consult pedagogical products link with the PNRV allows to work on educational actions on Environment with the CPIE[3].*

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[1]   The Universitary Institute of Teachers' Training.
[2]   Local centres for pedagogical documentation .
[3]   Permanent Centre for Awareness to Environment issues.

- *In addition: **Internet link**… projects of linking and exchange with **regional and international partners**.*

- *Finally, the core matter concerns the integration of ICT in school for knowledge sharing.*

Box 1
CHARTE DE PROGRES
POUR LA QUALITE DE L'ECOLE
sur le parc naturel régional du Vercors.

Le 7 juillet 1994
[...]
PRÉAMBULE

Le monde rural est en train de se transformer.

Cette transformation s'accompagne, dans les zones les plus fragiles, d'une mutation économique et sociale considérable, qui appelle un important effort d'adaptation et de renouvellement du système éducatif.

Pour que demain, les hommes et les femmes du Vercors puissent saisir et maîtriser les enjeux économiques et sociaux qui sont ceux de la société dans son ensemble et relever le formidable défi des mutations économiques et sociales, la formation a un rôle essentiel à jouer dans les transformations qui s'annoncent. Elle doit en plus de l'acquisition de savoir et de savoir-faire, conforter des valeurs et des comportements et permettre d'acquérir des savoir-devenir :
* Autonomie et responsabilité dans les choix de développement durable du territoire,
* Coopération et solidarité dans la conduite de ce développement,
* Créativité et excellence dans la conduite des projets individuels et collectifs,
* Recherche d'un équilibre entre l'homme et son environnement.

Dans les secteurs dévitalisés, l'établissement scolaire est souvent l'un des derniers services publics, lieu de rencontre et d'échange, pôle d'animation et de dynamisation, notamment lorsqu'il peut s'appuyer sur un fonctionnement en réseau. Son rayonnement constitue un facteur de plus en plus net de localisation des hommes et des activités dans la reconquête de ces espaces ruraux.

Une étude précise de la situation de l'école sur le Vercors, territoire représentatif des zones fragiles, où préexistait un partenariat actif entre les établissements scolaires et le syndicat mixte du Parc, a mis en évidence les conditions à remplir pour que le système éducatif local accompagne l'indispensable mutation économique et sociale.

Une identité forte, la qualité de projets ambitieux liés aux ressources et aux potentiels du territoire, devraient permettre aux établissements organisés en réseau d'assurer leur pérennité notamment en accueillant des élèves et des stagiaires de la formation continue ne relevant pas du secteur habituel de recrutement.

Les écoles et établissements du Vercors doivent aussi développer des relations avec les établissements d'autres bassins de vie et des partenaires extérieurs au massif.

C'est la raison pour laquelle, dans le cadre du parc naturel régional du Vercors, outil d'aménagement fin du territoire, les services de l'Etat et les collectivités territoriales compétents ont décidé d'engager un chantier commun qui permettra de construire un projet de développement pour le système scolaire, véritable charte de progrès pour l'éducation, prenant en compte :
* l'ensemble des niveaux de formation dans leur continuité : écoles, collèges, lycées, formation continue (formation générale et formation professionnelle).
* les enjeux du développement culturel et social propres aux zones rurales isolées et faiblement peuplées.

Et visant à :
* renforcer :
  - la qualité des prestations pédagogiques et de l'offre de formation,
  - la qualité de la gestion des ressources humaines des établissements scolaires et des écoles,
  - la qualité des infrastructures et leur maillage territorial,
* affirmer une identité commune aux établissements en renforçant la logique de réseau autour des thèmes de l'innovation pédagogique et éducative et de l'environnement,en cohérence avec l'identité du territoire.

Dans la perspective de la mise en oeuvre du projet de développement du système scolaire sur le territoire du parc naturel régional du Vercors, et compte tenu de la complémentarité de leur domaine de compétence entre les signataires ci-dessous désignés :
* L'Etat, représenté par :
  - le Ministre de l'Education Nationale,
  - le Préfet de la Région Rhône-Alpes,
  - le Préfet du Département de la Drôme,
  - le Préfet du Département de l'Isère.
* La Région Rhône-Alpes, représentée par le Président de la Région,
* Le Département de la Drôme, représenté par le Président du Conseil Général,
* Le Département de l'Isère, représenté par le Président du Conseil Général,
* Le syndicat mixte du parc naturel régional du Vercors, représenté par la Présidente.

Il a été convenu :

TITRE 1 : OBJECTIFS DE LA CHARTE DE PROGRES

1.1. Qualité des prestations pédagogiques et de l'offre de formation

L'état des lieux réalisé par l'éducation nationale met en évidence trois principaux types de problèmes :

* la difficulté de l'adaptation des élèves à l'issue de l'orientation ou de leur affectation dans des établissements hors du Vercors,
* une adéquation à élargir et à conforter entre projets d'établissements et besoins locaux, qui se traduit notamment par des relations insuffisantes avec les secteurs des entreprises ou les établissements extérieurs au territoire,
* une amélioration nécessaire des dispositifs locaux de la formation professionnelle.

Aussi, dans le respect de leurs compétences respectives, les partenaires, sont convenus de :

1.1.1. renforcer l'identité des établissements à travers le développement des activités et secteurs spécifiques lorsqu'ils sont liés à l'environnement ;

1.1.2. faire évoluer pour l'améliorer, l'organisation du temps de l'enfant ;

1.1.3. favoriser la généralisation de pratiques pédagogiques propres à renforcer l'efficience de l'acte éducatif et la performance de la formation des jeunes ;

1.1.4. développer le rayonnement culturel des établissements et de conforter leur fonction de pôle culturel ;

1.1.5. organiser un dispositif original de formation professionnelle à base territoriale ;

1.1.6. développer les formations post-bac sur le territoire même du Vercors.

1.2. Qualité de la gestion des ressources humaines

Dans ce secteur, l'évaluation de la situation actuelle et des problèmes repérés ont montré :

* un nombre croissant de personnels nommés à titre provisoire,
* un déficit de certifiés et d'agrégés par rapport à la moyenne académique,
* une forte rotation des chefs d'établissements dans certains établissements,
* un retard important pour la formation continue des enseignants au regard des pratiques académiques.

Afin de développer la compétence et la motivation des équipes qui auront à mettre en oeuvre la charte de progrès, les partenaires, dans le respect de leurs compétences respectives, sont convenus de :

1.2.1. effectuer les remplacements et nominations des personnels d'encadrement, administratif et technique, pédagogique et éducatif, en privilégiant les profils susceptibles de faciliter la mise en oeuvre du projet ;

1.2.2. stabiliser les équipes au sein des établissements ;

1.2.3. développer la formation des personnels ;

1.2.4. apporter un soutien aux équipes dans la mise en oeuvre des projets éducatifs.

1.3. Qualité des infrastructures et leur maillage territorial

Parce que l'établissement scolaire est souvent le dernier grand service public dans la zone, sa conception et son fonctionnement doivent pouvoir répondre à des besoins qui vont au-delà de sa mission première et qui ne sont pas, comme l'a montré le diagnostic préalable, toujours satisfaisants aujourd'hui :
* centres de documentation et d'information, installations culturelles et sportives incomplètes ou inadaptées à l'ambition des projets pédagogiques et insuffisamment développées en regard de l'éloignement des structures urbaines ;
* internats souvent mal adaptés aux nouveaux besoins des jeunes et aux demandes des familles ;
* absence de recours systématique aux technologies nouvelles de communication, limitant notamment la mise en réseau des écoles et des établissements et l'innovation pédagogique.

Les partenaires, dans le respect de leurs compétences respectives, sont donc convenus de :

1.3.1. poursuivre ou d'engager le programme de modernisation des établissements du secteur en veillant notamment à l'adaptation des infrastructures culturelles et sportives ;

1.3.2. doter les écoles et établissements scolaires de moyens modernes de communication favorisant notamment leur mise en réseau et permettant le développement d'activités culturelles ;

1.3.3. agir en faveur de conditions d'accueil et de vie scolaire de meilleure qualité pour les élèves demi-pensionnaires et internes.

TITRE 2 : MODALITÉS DE MISE EN OEUVRE DE LA CHARTE DE PROGRES

La présente charte de progrès est conclue pour une période de trois ans (1994-1997), période à l'issue de laquelle sa prorogation pourra, sur proposition de l'une des parties être examinée et décidée par l'ensemble des autorités signataires.

Il est institué un comité de pilotage, présidé par le Recteur de l'Académie de Grenoble, composé :
* des signataires de la présente convention,
* des Inspecteurs d'Académie de la Drôme et de l'Isère,
* d'un chef d'établissement représentant le Collectif des établissements du territoire.

Il a pour mission :
* de veiller à la réalisation des objectifs, à la mise en oeuvre des mesures et à la cohérence des projets engagés par les partenaires dans le cadre de la charte ainsi qu'à la mobilisation des services extérieurs de l'Etat et des partenaires économiques et sociaux ;
* d'arrêter un dispositif d'évaluation ;
* de veiller au transfert de cette méthodologie à d'autres zones rurales fragiles.

Il arrêtera, lors de son installation, son règlement intérieur.

Le comité de pilotage sera assisté dans sa mission par un technicien du parc du Vercors, chargé du suivi et de l'animation du projet. Les partenaires s'engagent à mobiliser les moyens nécessaires au bon déroulement de cette mission.

[...]

From the Charte preamble, it may easily be drawn that the initiative takes place in a rural area which is meeting specific limitations with its educational system. In addition, if technologies are mentioned in the Charte and if it refers to the "lack of systematic use of Information and Communication Technology", it is on the one hand regard to the need of schools of being networked (no justification are given for this need) and on the other hand regard to the need of pedagogical innovation. In other words, ICT are not sought for themselves but in the more global framework of the socio-economic transformation that are affecting the concerned rural area and specifically regard to their educational needs.

It must be noticed than in no one document promoting "les Reseaux buissonniers" initiative, a mention is given on the investment or the allotment of responsibilities among the signatories commited by the Charte. This gives certainly a glance on the status of "costs" in the French context when education is in question: these issues are relevant in certain context and of concern for certain level of competence, but in the place where concretely takes place the experiment, the notion of "how much does it costs?" is automatically answered: "in my classroom there is X computers, one printer etc" when the experiment les Réseaux buissonniers involve also a server, a set of technical tools, a package of multiple software some of which have been sponsored and some of which bought, etc. In addition, costs are not only constituted by equipment expenses, also should be considered the people who full time or part time are managing the whole story. In the French context, this has to stay implicit as if talking money was, in a way, "obscenity".

On the site

I discovered les Réseaux Buissonniers and MC's class through the World Wide Web. Having found a good recommendation channel, I took my first contact with MC by email. We arranged the period for the observation and parallelly she asked me to inform and obtain an agreement from the institutional body: the Regional Direction of Education. I had to be agreed. I therefore sent a mail to the Director with a Carbon Copy to MC asking for an authorisation for observing her classroom. I received no answer and two days before my arrival in Villard-de-Lans, we decide by phone with MC to consider that this silence was an implicit agreement.

In order to know each other before I arrive in her school, she invited me for a "gratin dauphinois" at lunch time at her home in Villard-de-Lans the Sunday preceding my first round observation for 10 days.

I arrived from Paris in due time. Informal presentation with MC: "Well, uh! hello then, I am Marie-Claude" ("Bon, ben … salut, Marie-Claude c'est moi !") then I was presented to René, MC's husband who is also the Director of the School and her two sons (both around 20). Then arrived François with his two children (a girl aged 13 and a boy aged 6). François is an extremely important actor of the Réseaux Buissonniers initiative: he is one of the main initiator of the project, the manager of it for the Parc Naturel Régional du Vercors[1], the implementor who negotiated the involvement of all the concerned parties and who organised relations with all the providers (Apple, Lotus, etc.), the trainer "in chief" at the initial stage of the project and he remains the animator of all the experience and probably its "soul". I had already the occasion of meeting him before, in a conference organised by the Commission some months ago. He informed me that his position was becoming uncomfortable and that his employer was looking for terminating his contract at a moment when he felt that all the experience Réseaux Buissonniers was too fragile. He had no problem for finding a new job, he was just upset as he thought that all the experience would be now seriously compromised. He knew that a strong mobilisation organised to support him and prevent the Parc from killing the experience through

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[1]   The "Charte" is presented below in a box.

taking off its main pillar. Then came Martine, Francois's wife, who is school teacher and co-teaches a class with René. The atmosphere in that sunny day of February, in the beautiful environment of the Vercors, was relax.

My personal positioning

My relational strategy was clearly defined, I had to be a bit distant and not seductive for not provoking the actors behave differently from what they always did and prevent any "transfer" with MC or the pupils who could use more the computers just for being nice with me and make me happy. I adopted then a low profile, the one of somebody who is in charge of doing his duty and who does it "technically", that is without "soul": discrete, a bit cool and indifferent. My strategy of neutrality was rather effective, may be a bit too strong since at the beginning I was not far of being felt an antipathetic person. I think that during my stay I better tuned my behaviour and was judged somebody talkable although not an exhilarating companion. Coming from the South I am more affective and warm (I think) it was hard to me to come into that role and play that scene, it had something schizophrenic. It was so heavy for me that three days after my arrival, having a lunch with MC, I felt necessary to tell her about my behaviour and the reason for it. She told me that indeed she had been a bit disappointed at the beginning (and according to her also the pupils) by my position and she also considered that it had been very effective as in few hours she and her pupils forgot totally my presence. She also laughed when considering that it is probable that if my attitude had been different she would have start to organise much more activities with the computer in the classroom, just for me! This discussion warmed up our relations and as somebody knew the why of my artificial behaviour I could feel less schizophrenic the rest of my stay.

Over the lunch, on this first day of my arrival, I explained the MBOX project in details, its rationale and objectives, its partnership, the institutional context of Socrates, something vague and exotic to my interlocutors, and I explained also what I was planning to do in the classroom. On her side MC had some discussions with her pupils who were asked if they were okay for having a silent stow-away (passager clandestin) in the classroom during two weeks. She also asked their parents. A general agreement was existing and they now where expecting me.

My 1st arrival into the school

During the afternoon, I went with MC in the school building (of course closed on Sunday). It is not an old school building but a recent one (15 or 20 years ?). Coming into the classroom I was immediately sensible to the way it is disposed and to the "estrade" size. My Harrap's gives for "estrade": "dais, rostrum, platform, stage". I don't know what to choose as a word since in my memory of pupil the "estrade" was an important piece of the school ritual and scenography, it was a big stage where was the master's desk sometimes and where the master was standing, higher than the learners' floor, expressing thus the extent of his authority.

Here the "estrade" is a sort of scale model of what I knew as an "estrade"; something atrophied: 2 meters long, 50 cm large, 20 cm high compared to what I remember as an "estrade", something like 4 meters long, 2 meters large, 30 and more cm high, some having some stairs to be accessed. I left an elephant, I find a mouse. I felt that the "estrade" changed its ritual function as if it had been functionalised: this one apparently was aiming at compensating children small size, thus enabling them to write from the top of the black board.

The classroom space is organised by group of 5 or 6 individual tables plus some individual tables not grouped, and the teacher's desk. The tables also are showing something modern (I mean not from the beginning of the century, I would say more 70's), the tables are not of the old style I have found in other classrooms in other schools where I went, in Corrençon for instance, a few kilometres from Villard.

Asking the why of this disposition to MC she tells me that she passed from a frontal in-row disposition she used up to 4 years ago, to an in-circle disposition she experimented. "*Although better than the frontal in-row, definitely too limiting in pedagogical terms, in-circle disposition is not really satisfactory. It is as if you were always turning in the middle of a circle, and had to be in the centre of attention. In addition, you are always having at least half of the children in your back, so you pass your time turning and turning the head around. I'm not sure if it is preventive for stiff neck (torticolis) or if it is a way to get some. Anyway I survived.*" Since the beginning of the year they decide with the kids ("on a décidé avec les petits") to arrange in that way which is a classic disposition of "classe

unique"[1]. "*The problem now is just that when talking to the class as a group, some of the kids are obliged to turn on their seats to listen to me. In other words from now on the risk of stiff neck is more on their side*" she jokes.

Having decided to leave the children to form the group as they wanted, one time agreed 5 pupils as the standard size for a group, MC discovered when they were negotiating groups formation that the closest friends spontaneously separated explicitly to put themselves in condition of working and avoid intempestive chatting! In the different occasions when I discussed with MC of the way the kids are cooperating, the image of the "invisible hand" came to my mind. It seems to be a constant in human groups dynamism.

In the back of the classroom, three Apple computers are installed sharing a printer through an Appletalk network. The main computer is a Performa of the 6000 series (colour screen, CD-ROM driver), connected to a scanner, equipped with a fast modem. This is the tool for all communication activities. A second computer is a Mac Classic (all-in-one desk computer, black and white screen). The third one is a Powerbook 170 (a lap-top computer, black and white screen also). Formerly the personal computer of MC, she decided to put it in her classroom in order to give more opportunity to the kids to access simultaneously to the use of the computers. She bought for her own use another Powerbook (5300 with a colour screen) which she brings everyday and which is also available for the children in case of need.

For the rest I found on the walls classical reminder for homophones (ou/où, a/à, et/est etc.), conjugation, etc., drawings, paintings, poems,…

With MC we went there to determine where I could best stand in the classroom. One of the table behind MC place was used as an extension of the classroom library, there were piles of books on it. We decided to use that table for my installation and ranged the book on another place, I therefore just needed in addition a free chair that MC found in a corner.

I was ready.

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[1] In rural areas for demography reason, when 20 to 30 children from 6 to 11 have to be framed in a unique classroom by one teacher , the teacher most frequently organises the classroom in different spaces where all the learners of a same instruction level are grouped. This disposition is very classic in this context.

My second 1st arrival in the school

I arrived the school at 8.30 and came into the classroom following the 29 pupils which were in row waiting for MC opens the door are in the last grade of Primary education 10 years old being the average.

Coming into the classroom all the pupils are going to their table and sit directly without expecting any instruction from their teacher. I go to my place. MC waits a while that the classroom is quiet and then she presents me briefly. She then give me the floor to explain the pupils why I am there. I begin by thanking them for accepting my presence among them and that I will try to do my best for not disturbing them. I add I am interested in seeing what they are doing with computers and the communication facilities and also in seeing how MC is doing with them in order to make aware all people interested (teachers, parents, decision-makers) of concrete use of communication facilities in the educational context. I said also that the utilisation of computers is a small part of their activities and that I am interested in the way things are combined in their practice and experience.

Then MC starts on reminding the program of activities for the morning:

"I remind you we are in the period of the contract N° 6 [see below Box on Contracts] you started the 27 of January and you all have to end the 18 of February. This morning we have to achieve the different activities we planned last Friday:

-   the poster for the masked ball: you have to reach an agreement on the layout on the basis of the different proposal which have been presented, to determine the fonts to be used, editing and printing.

-   to print the texts for "Le musée farfelu"

Box on Le musée farfelu

Yves, the teacher of Arts in the Villard College, is also the Music teacher in the Primary school. He prepares with his pupils of the College first grade (Secondary education) some sculptures made with paper and cardboard, which represent mythic animals they invent, sceneries for fables and stories etc. The pupils of the last grade of Primary education which are in MC class (and have Yves for Music teacher) are writing stories on the basis of these sculptures which are forming what they decide to call *Le musée farfelu* (the "Wacky" Museum).

-   *ending French*

-   *ending Maths*

Now it is to you."

0n Contract

As for organisation of the classroom, I had a colleague who had a real "classe unique" in Engins few kilometres from Villard in an even more rural area than where we are here. A real "classe unique" that means 27 kids from 6 to 11 years old and belonging to the 5 different levels of Primary education. That is multilevel and multi-age. In spite of these a-priori difficult conditions, he was performing well in using computers in his classroom, thanks to the organisation in workshops imposed by the circumstances.

Paradoxically, multilevel and multi-age classes can offer a decisive advantage regard to technology uses not only respect to this organisation in workshops but also due to the fact that the elders can take in charge a large part of the computer literacy needed by the youngsters.

As a matter of fact I took him and his experience for model and he gave me the structuring of all the work activities he was conducting in his class. Unfortunately, I could not work that way. Finally I had to adapt and find my own way. (...) I failed in trying to reproduce my colleague experience, working into workshops was not enough to me. That is why I started the Contract story, which is a form of individualisation in the sense that if the contract is the same for everybody in terms of performance required, each kid can organise her/his work in the order s/he wants and organising her/his time freely. I minimised my control function a lot. Regard to this the group as such exerts a "moralising" pressure, because as a group they know that I will ask them why they have left their fellow-learner not to do her/his duty. Concretely they are responsible not only for their work but also for the work of the others. This has extremely positive effect I have been amazed of their capacity of autonomy."

Immediately the work starts as a cooperative work. all checking in her/his group at what point of her/his own programme s/he is. MC circulates from group to group, when she wants to speak to a child she crouches down, crosses her arms, put them on the table and whispers with her/him. When she talks to a group she stands up.

I spent a very long time at my table without moving, just looking alternatively all the children and no one of them could inspire something else than sympathy and tenderness. The first day I had the impression of a real physical coordination between them. This was confirmed by my experience, their relations were very smooth and I would say "tender" on to the others. Over 10 days I have seen or heard nothing falling on the floor, not a book, not a chair, not a bag, not a glass of Coca-Cola in spite of the number of the different ceremonies they arranged in the classroom (about 3 in 10 days!). The sound level appears to me high, but it is more due to the building and classroom characteristics than to the sound level of children exchanges who are very moderate in their voicing. However 29 children when gathered form necessary a noisy population.

The class begins at 8.30. Around 10 a.m. takes place the recreation in the schoolyard: a good occasion to play football, shouting, boxing, to dispute and be reconciled, get married and divorced, be loved and abandoned, be humiliated for being loved by somebody you don't want to love you, be desperate because the one you love ignores you. In fact I have been totally stunned to see that the schoolyard was indeed a complete and rich microcosm homothetic to the outside environment in many respect. During this time, keeping an eye on the children, the teachers are taking their coffee and since we are in Villard they are talking "weather": will it snow, won't it snow? Of course skiing is one of the main activity here. After 20 minutes the different classes are asked to organise by rows to go back to work from 10.30 to 12.

Some of the children are staying at school for having their lunch in the dining hall, each teacher takes her/his turn and those who are planning to stay at lunch time have to reserve before 10 in the morning. If the food is the same for children and teachers, they do not stand at the same tables.

The afternoon the same scenario takes place starting at 1.30 ending 5.00.

Using computers

In the computer corner children belonging to different groups are going to the computers by two or three, always boys with boys and girls with girls. A boy , J, is passing from a group using computer to an other group using computer, making his recommendations, giving advice (This is a special behaviour which is directed to me, I redirect my attention on the other groups). He is caught by MC who invites him firmly to finish his own duty instead of keeping himself busy with others work on computers. The tone is a family tone. MC explains to me that J doesn't belong to any group as he wanted to stay alone. This explains one of the isolated individual tables.

MC wants to have a review of what is done by whom. She asks for it: "How many of you have not prepared their texts for Le musée farfelu?"

Just two boys answer. They are supposed to work together on it and they have prepared nothing yet. They stop what they were doing and meet to define the content of a text and to write it together. This is a paper and pencil activity. Implicitly, it exists a sort of priority of these tasks that are collective and require all the pupils conduct them.

MC tells me that these two boys were forming a group initially as they wanted it, but she was obliged recently to separate them *"with their agreements"* she adds. She seems embarrassed and tells me *"One of them (K) is already 3 weeks late on the scheduled contract, I have a problem with him, I will tell you more about it. As for the other, M, I would say it is just a matter of laziness, even if it takes more time with him, at the end he performs not so badly all what I am expecting from him.").*

Another boy, A, comes to MC to ask her: *"Can I go to the machine for replicating?"*

"Okay, do it" she says.

He goes to the Performa, launch Lotus Notes, enters the sending mail part of the software, queues it and launch the replication of Lotus Notes Bases. The connecting sound though audible is not too noisy, he calls for another friend A'. Start a discussion between them to which I understand nothing being so implicit for both.

- *Shall we do it?* said A'

- *I guess no, it is not corrected, not finished. Better not to send it.* says A.

- *But it's okay, we don't care, let's do it. It is not really a problem anyway.*

- *Okay, okay, you're right, it is not really a problem. We can do it.*

When MC arrives to check the computer and asked them what they did, it is clear that A has sent the message, operated the replication, and also that one time connected they both decided to send a file which was a working one and therefore not finished.

- *It's a bit silly* she said. *Are you happy with that? Big deal!*

- *But Marie-Claude, it is not really a problem!*

- *No you are right, or if it is one, it is just for you since other schools will see that you were not able to send something complete as they asked us for. For myself I don't matter.*

On the Mac Classic which is on the left from my table at about 2 meters, two girls (J' and M') who do not belong to the same groups are negotiating who of them is taking the command that is controlling keyboard and mouse. A very civil dialogue:

- *M', would you mind if I type?*

- *Of course, not, it is your turn.*

- *You're sure? I know you like this so much!*

- *But it is okay, J', I will have other opportunity and now it is really your turn, go ahead.*

- *Thank you very much! it is very kind of you!*

Then they are spending all their time modifying fonts, size and enrichments of the title for the text they are preparing on the Witch... It takes may-be 10 minutes of changing and changing and changing. Each time they obtain a new result they comment it.

The recreation takes place

When coming back in the classroom looking at what they did MC asks them:

- *Tell me, M' and J', did I asked you to care for fonts and size? we are not at that stage in the making of Le musée farfelu. Please, do what I asked you to do: just type in your text and save it on the hard disk and on your diskette.*

- *Okay, okay, Marie-Claude, but a Witch is somebody terrible we need a frightening title.*

- *Well, that's for sure but are you going to type your text now?*

- *Yes, yes, for sure.*

One time, MC has left them, they start at typing two lines discussing each word that they have already prepared on a paper. I can see that J' doesn't know how to type she just uses two to four fingers, and from time to time, one finger seems to her enough, she concentrates on the keyboard and when M' who always control the screen says: *"No it is not that"* or *"Yes, this is it"*, J' looks up to check what is going wrong.

When the two lines (which is less than one tenth of their text length) are typed they restart to modify fonts and sizes alternatively on their title and on their text. The activity seems very enjoyable and they are very satisfied of what they have been doing. All at their enthusiasm, they quit the application having forgot to save their work. They exchange an interrogative regard when understanding what they did, J's shoulders come up to her ears, her hand in front of her mouth she starts to laugh, and M' start to laugh on her turn but more frankly and shouts: *Marie-Claude! we've lost everything!*

MC does not depart from her sense of humour and says: *I guess you had a problem with the Witch, don't you think so?*

Close to where J' and M' were, a group of 3 boys is working with the PB170. X in front of the computer has typed four lines that were dictated to him from the hand-written draft by D who is behind him. X says: "I'm fade up now, one of you continue". D pass the draft to G and sit in front of the computer. X goes back to his place in his group and pick in his bag his contract to check at what point he is. All the points of the contract he has already performed are passed with an highlighter pen. He asks his fellow-kids in the group to show him how their contracts are looking. Immediate and visual information.

A and A' have been asked by MC to do a multicriterial research on the CD-Rom Encyclopaedia about "light". I can see they are very happy and I come closer to them to see why they are so satisfied. In fact they do indicate their first names and their family names as criteria in addition to the words they can think of as key-words. One of them, A, is more anxious:

"Please A', stop now, don't move from that article we've found, we have to wait for Marie-Claude, she has to see what we have found."

When MC arrives, they have lost their articles. Happily, she knows the software functionalities better than they know. Not paying attention to their story on how and why they have lost the article, she retrieves it using the "history" function. The article seems not very satisfactory. With A and A' she starts to explore different key words, not satisfied by the result, she turns in direction of the others children and says:

"Okay, we've found nothing really interesting about "light" and "colour" on the CD-Rom. I want you all go to the Documentation room and that each of you bring back one or two books which concern "light" and "colour". We will have to work on it to-morrow. Don't forget, take off your shoes before coming into the room, and one time in the Documentation room be polite with whoever is in the room and be silent.

Besides the school:

MC invited me as François suggested to participate in the meeting which was taking place at the District on the future of les Réseaux Buissonniers. I was presented there and I explained the why of Mailbox. All decision makers who were there were very happy with the definition of the project:

"That is the point, we don't know what concretely is learned, sure using computers is good for the kids in terms of culture and literacy, but we have no proof of any value-added. Having computers in schools at the moment justifies only to avoid inequalities between the have and the have-not. That is a social issue not an educational one, which means that if it definitely is a social issue it has not necessary to be solved at school level. Of course we believe, it impacts positively on education, if not we would not have launch such an ambitious project, but that is for sure that your observation is extremely important from our point of view of politicians and decision makers and that can be of great help."

I picked a certain number of discussion points during this meeting, which are reflecting also a self-evaluation of les Réseaux Buissonniers.

GG:

These tools have to be oriented to the class work. It has to be used to open the class on the outside world: first opening on the plateau of Vercors through exchanges between classes were there is at least some common perspectives on teaching logic, second opening through the Internet on other place in France and in Francophony.

But for doing that we cannot work with equipment that are turning over different places, we need some fixed equipment in the classroom. Turn-over equipment is nice when initiating a process to decide if you feel at ease or not for starting for real the activity. In fact, what I personally feel is that the demand is much more a demand for technical support than for pedagogic. These machines are damned too complicated, not only for the kids but also for us. If we hide the difficulties we had and we have on the technical side, we make feel guilty those who have difficulties and think they are alone to be so stupid that they are not able to have these machines running normally! In addition when I think we are using Macintoshes which are much less complicated than Windows machine!!!

A good thing in the training seminar we had is that they contributed to bind in a team all the teachers involved in les Réseaux Buissonniers. However, there is not enough sharing among us.

I plead for my chapel but it is my experience that the multilevel class enables a very immediate use because we are used to work by workshops. On the contrary, with other organisational forms, it is no more a tool integrated to the class, it becomes a discipline to teach among other disciplines.

MC:

In fact interclass exchange are very irregular. In my class for instance, the most motivating activity now concerns the work they are doing with Le musée farfelu. Yves (the professor of Arts in the Villard College) *discusses with them the texts they wrote on the basis of what inspired them the sculptures created in the Collège. He takes in charge the layout an editing to organise the museum. Therefore we organise more to use the network for our needs. In fact, animating the network requires a simultaneous preparation in class by the teacher and then a real follow-up of the activity. It is not so simple. What we experienced was an on-the-job training with a lot of technical difficulties in the*

discovery of the computer. We started too early in communication activities and both the kids and the teachers are disappointed by the exchanges that are taking place on the plateau of Vercors. Correspondence is a very serious thing for them, if they have no answer they are desinvesting the activity and are no more interested in it. They have been awfully disappointed. It is also partly teachers fault, I don't fully agree with GG since, if mastering technology at a minimum level is a pre-requisite, their are real issues in terms of pedagogical constructs. For instance, we all started to send from class to class material which were completed and therefore which were not asking for being discussed amended transformed interactively by all the classes involved. The work was certainly beneficial for the class-sending, but what for the receivers. These are pedagogical matters we have to reflect on it.

MC's views were confirmed by a "pedagogic adviser".

Another point raised by a participant was the problem of discontinuity:

Colleges do not practice the use of computers as extensively than what we do in Primary, and parents are now coming to us worrying: if there is no continuity in the Secondary school why starting in the Primary? In addition the children we had in primary are really frustrated in the College.

Also discussed in that assembly some of the cost questions :

The initial investment at the District level has been 500 KF (77 K.ECUs) the Ministry of Education organised free time for the teachers, training sessions, human support at various level, which evaluation has already been circulated.

The discussion went then on the special situation of François. I asked for the floor, saying that probably it was abusing from my part but anyway as I was there if they would not mind I would like to express myself on this issue. I insisted on the multiple functions that are needed and which all concern social mediation if any technology use is foreseen: technology watch, filtering, support to teachers, negotiations inside schools, technical support, pedagogical support, launching of common activities, networking, etc. I finally said that if these functions were not fulfilled, be it by François or not, their investment would be lost. And also from another point of view, in spite of not knowing very well François, I had seen he was really appreciated by all the actors on the field. And if he had to

leave that way, even if well replaced it will take a long time to the followers to rebuild all the human network which is the main strength of any initiative in this field.

After my intervention the representative of the Academic institution (the one who had not replied me) turned to the District responsibles and said: *"Well I think this summarises clearly what are now our responsibility, you the District and us the Ministry of National Education have to concert with the Parc, because we both invested a lot in this story."*

The meeting having ended, he went to me, was very warm, and told me:

"If I did not answered your request, I did it for you! I knew MC was okay. If I had to answer, I should have done it formally and then I would have been obliged to ask you for giving a medical check, an extract of your police record and about 10 other documents, which would have taken months for you. Doing nothing, you are here, I am highly interested on what you do and on your results. Oh! please, before I forget, for interviewing the children don't forget to ask for parents authorisation and also take care not to be alone when interviewing a child."

Back to the school

Today "Dictation". During the dictation, some of the pupils are asked to stop at the end of certain paragraphs while others continue. Two groups seem to be formed one with weak pupils (who were stopped at 144 words explained to me MC) and the others that can follow the whole text (190 words). MC will tell me after: "Of course it is a pedagogical matter: do good is not a matter of quantity, the real issue is concentration and management of attention, when I ask them to control if subjects and verbs are matching nouns and adjectives.

A female teacher comes into the classroom, she takes MC in a corner to show the support letter she wrote for François. She just wanted to show it to MC before sending.

MC gives her instructions:

Those who have already finished their controls, or their other tasks, are free to go to the computers in order to continue the activity they have planned.

Then she goes to her desk and check with her computers her administrative business: at the moment, she has to follow up what is going on for the Tombola tickets which are sold by the kids for the organisation of a visiting tour at the Futuroscope of Poitiers for all the class. For doing her administrative work she uses Filemaker Pro.

From what did MC as tools for herself, I had a perception of a tool which enabled her to have a global picture of all her class activity. I was even more aware of it as Jackie, another school teacher in Villard, pointed out, some minutes ago when discussing in the schoolyard, that a part of the use of IT could be of value for the professional needs of the teacher. But I clearly felt that this issue was really a personal one and that this could be only exemplified if we could provide examples on how different teachers are organising the data they have for individual learners and how they aggregate their information in complex tables incorporating nearly everything.

L and T, two girls, are together at the Mac Classic, they are typing a text. On their left 3 boys (not the same than the ones reported above but a new time they were three and those three also chosen the PB170) are sat in front of the PB. One reads, types and checks, the second one just checks, the third one, Jules, just bugs the two girls by depressing the capslock key every two words typed. And the words "Stop it now Jules!" becomes a leit-motiv which rhythms the activity. The two girls are very patient. The presence of the observer doesn't affect the behaviour of Jules who knew after a while that I was there. I wondered if the patience of the two girls was due to my presence, or if it was a usual behaviour.

But MC has also eyes in the back of her head: *Oh! Oh! My Jules, I don't see you are very contributive where you are, you should have a look to your own contract! Don't you think so?*

I concentrate on what are doing the two girls.

L is on command. Three lines are typed, L and T decide to check with the spell checker. Part of the sentence is: "Un policier m'e**n**mena en prison" which should be written "Un policier m'e**m**mena en prison". The spell checker displays "m'e**n**mena". L hesitates. There is no other word proposed by the spell checker, the command available are: Replace, Verify, Go to next, Keep, Cancel. As L understands there is a misspelling (namely because of the physical tension of T besides her) she wants it to be corrected: she validate the Replace button and the misspelling stays unchanged. She is

not satisfied and she feels the impatience of T growing. She launch a new time the spell checker and a new time it displays "m'e**n**mena", a new time she asks this to be corrected in activating Replace. Though it doesn't work well, she operates 4 or 5 times in the same way being more and more upset since she know and sees it is not corrected. She is not really aware of her mistake, she just feel uneasy and so concentrated that she cannot even hear T besides her whispering "*2 m*", however she is answering automatically to that suggestions she's not understanding:

- *Yes I know, but it does not want to correct it.*

- *It' s wrong, correct it.*

- *Yes I know, but it does not want to correct it.*

But L becomes more and more stressed (she looks at her hands, at the mouse, at the screen and at the keyboard alternatively) T does not insist, it is clear she respects her friend. She understands that she cannot help her as L is not available to any remark. The tension becomes critical. L turns to me and asks me:

- *What's happening?*

The question is so strongly directed at me that I really feel responsible.

- *You know I am not a teacher, but I remember that in French a **n** before a **m** is always transformed in **m**, and this gives **mm** instead **nm**, I always used this recipe, and it always worked,* I answer.

- *Oh! yes I remember, but why it is not corrected.*

- *Because it does not propose to you any other word than the one you wrote. When you command Replace, it replaces with the word which is displayed in the window. If you don't change the word, it is kept as is. So you have to correct it yourself by changing the **n** with an **m by** typing it and then to ask replace.*

My explanations seem satisfactory to her, her face which was tensed, is now completely relaxed.

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Common work today on geometry. Most is revision on surfaces, square, rectangles, triangles. etc. As a matter of fact the contents are the same as last year.

Discussing with MC she remarks that from the control she did today, more than half of the groups performed very well in French that is in writing and making exercises. In fact she says when doing their contract pupils have organised their time in such a way they devoted more effort to French than to Maths and this result in a much lower performance for this discipline.

Insight

Incidentally when discussing with MC on the attitudes of the children regard the different disciplines, she wondered if the more often, interest, indifference, rejects or fears expressed by the children were not highlighting parents attitudes much more than giving a view on learners disposition.

Ordinary business in the classroom, those who are late in their contract are making their exercises, those who have some time left go for asking MC on the best way to use it. R shows to MC 10 (beautiful) drawings she has done that are all illustrating an idiomatic expression (like "il pleut des hallebardes" which means "it's raining cats and dogs"). MC proposes to R to scan the drawing one by one, to clear the definition, and to take the responsibility of putting on the network one of these drawing each day, with a message asking what expression this drawing illustrates and what does it mean. With R she goes to the Performa, put the scanner on and shows to R the process:

Now do it two or three times in order you remember it to morrow and you are able to do it on your own. Remember I have made a short notice for use which is in front of you on the wall. And if your not sure take notes for yourself on the process.

One time they have an electronic file for the drawing, they launch Lotus Notes, choose the Lotus Notes Base where they want the message be available, create the message and attach the file. R launch the replication process to send the message on the Lotus Notes server.

When they have finished the two A (A and A') replace them in front of the computer and with the drawing module of Claris Works they begin to reproduce on page of their geometry book which gives a synthesis on surfaces and formula to calculate them. MC is not sure that other children on the network will be very interested of it, but she thinks that they are free to do it if they want to.

Mail exchanges

I concentrated on my reporting on the use of computer I could observe and for instance I am short on mail exchange. This is due to the fact that most of the time replication of Lotus Notes Bases takes place two times a day, the morning to collect received mail and other documents send by the other classes on the network, and the evening to send mails and other documents that have been produced. Generally, when a mail arrives in the class, it is print, read to all and circulated to the ones who want to take in charge the answer. Those in charge of answering handwrite their answer, input it in a "reply" message in the Lotus Notes Base and ask MC for checking or not depending on their feeling of self-confidence. MC does not exert any pressure on this, except when it has been decided that she had to check it (whatever may be the reason). As a matter of fact there is very few things to observe as such since most of the activity is "invisible". It is a bit like in a stock-exchange place where exchange of high volume of bonds are operated through a set of sign very formalised: there is no relation between the volume and the exchange process. Answering a message is like accepting a command. As a matter of fact, not all the children are answering messages: it takes time and therefore the activity fall the more often on those who are both interested (not all) and those whose work is enough advanced for having time left to do the answering job.

This reveal a special feature in terms of pedagogical terms. The organisation of the class into workshops reveals:

- extremely powerful with good learners who can develop their activity as much as they want and in the direction they want;

- also extremely powerful with average learners who organise themselves both helping and competing;

- but for bad learners, if they don't go worth, the benefits they can get from the new organisation is not clear.

There, only three children were in that case of being below average. When considering individual characteristics, it appears that one of them doesn't perform well in spite of his real efforts: S.

S is a very nice boy, discrete, always ready for working and playing but who doesn't seem gifted (at least at this stage of his personal development). In addition I understood he is also handicapped by an environment which is far from optimal. But S seems happy in school, he is well integrated in his group and is appreciated by his comrades. They are very kind with him, they check frequently with him what he doesn't understand in order to explain to MC. It is really a lovely thing to see the group on a mission (en ambassade) surrounding S, going through the classroom for discussing with MC and S what they can do for having him better perform!

And for the two of them remaining they spontaneously tried to form a group together before being asked to separate. On these two:

- One is just lazy, and has extreme difficulty to concentrate[1], but when confronted to the risk of not being able to integrate the College next year, he improves his results for the controls and is then able to demonstrate acceptable if not always good performances. He plays the sort of comedy of "a son of a notable", his future may be simply to do what his parents did.

- The second one, P, is totally unmotivable, everything is boring to him, he complains himself from feeling totally inappetent. One day when asked with his comrades to finish a special task on his notebook, I saw P behaving strangely: sat on his chair he suddenly plunged the head in his schoolbag, which was on the floor, as if he was looking for something. I don't know exactly what he was doing there. Eating cookies? drinking something? I don't think, or may be at the beginning, but my emotional impression was that he was looking for a parenthesis to occupy or a mouse hole through which vanishing. Was it in order to prevent MC from asking him for anything? I am not sure. But the important thing according to me is that he spent the head in his bag 7 minutes long. Yes 7 minutes, it is incredibly long, and all this time I have been checking my clock! I was a bit oppressed thinking of the blood coming down to his head. And if I had not seen his move (head, face, hands) I would have think of a malaise. In many occasions, he had forgot his book, or his notebook, or forgot to bring a signature of his parents for this or that. In

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[1] The feeling that capacity of concentration tend to rduce over the last three years was a real worry in the discussions of the teachers, who were considering this as a new emerging trend.

most situations he was apart. Although he has a very nice voice, sings very well, likes music, and is known for these qualities by his classmates, when I saw him in the Music course when all were thinking (they all were so cute!) he was like absent, hardly whispering the text song.

This description could let imagine that P is a sad child. But not at all it is not the case. He is a beautiful 10 years old boy, solid, healthy, smiley but nevertheless ... unconcerned, free from any care at least in appearance.

When interviewing him I discovered he was just dreaming permanently of an other world. And I felt his dreams absorb all his energy:

"...no more war, no more hunger, no more garbage. I would like to be a magician, a sorcerer, I would like to know how to fly and for school I would like having the cleverness of B. I feel no desire for doing something, I do damn all from one' s day end to another day, but I want to pass in the College. If I don't succeed my parents will put me as a boarder in a boarding school, I don't know where, they said in Paris. I don't want to go there, it will be awful for me for sure. I can't think of it, it is obsessing. It is really true, I am lazy, not enough concentrating... I know all that but I really can't do another way. May be if MC could frighten me, be very hard with me, if she was willing to impose strongly to me to make my work. But no..., I can see there is no way there, as I told you the thing, now it is no more possible... you are going to repeat to her and everything I said; and now if she does it, I will know that it comes from you and I won't be really frightened by her."

Since he knew nothing about "professional secret" and "ethic", I probably did not succeed in convincing him that I was keeping for me what he said. Jean-Paul Sartre wrote a short story which title was "L'enfance d'un chef" (the childhood of a born-to-be-a-chief) in fact, with the distance, I perceive P's childhood as the one of a born-to-be-a-perverse: an extreme desegregation in the confidence he has in others, organising relations in terms of emotional manipulations. I could see him deliberately organising with me his own double bind, which certainly was reproducing what he was experimenting in his family context: he wanted me to repeat to MC what he was saying to me, and he wanted her to do it spontaneously without being told to do it, etc. As a born-expert in perversion,

after finishing with me the interview, he went to MC to tell her what he told me in order to complete his scenario.

(I leave you free of your interpretations. P has been for me a very important "encounter". He is a really interesting person, I felt very much in sympathy with him and very much concerned, reason why I really wish him all the best.)

Coming back to the "estrade"

I experienced a new time the ambivalence of the "estrade": going to the blackboard remains a privilege which is controversial. It can be researched when self-expression is into question, for instance when the question is asked of "who knows the recitation and is ready to declaim it?". Most of the children enjoy to play the scene, with moves and accessories. Symmetrically going to the blackboard can be feared, when it is for correcting an exercise, be it of Maths or French.

Communication unachieved

When they had the opportunity to be with their correspondents in Engins in the same bus going together to the Futuroscope, the children of Engins and those of Villard did not had any discussion together. It makes clear to me that communication needs to be organised and that teachers will take time to see exactly how to launch and monitor a communication process at a distance.

Excerpts from discussions with teachers

Selected transcripts of teachers' and children's interviews

Excerpts from discussions

Excerpts from discussion, are reporting what I found in my notes on exchanges I had during lunches, or on the road when going to certain meeting, or in the schoolyard during the recreation...

Question:

Some are calling you Marie-Claude other Mme Ollivier-Pallud, some are in very familiar terms with you (tutoyement) and other very respectful. What explains these different behaviour?

MC

I don't know. I guess each one solves her/his distance problem to me as s/he can. I am not sure because I've never think of it or taken attention to this but I think t is balanced between girls and boys. Oh! Please don't make me a new problem with that, I don't know really is it important for you?

I am interested in the implicit and invisible way that authority and power are exerted on them and also how these are learned by the children, and the special role you have as a teacher regard to this.

MC

Your question on exerting authority and making police, I don't know… I don't need, in fact I started to be a teacher when I was 18 years old, it may be a bias on my personality, it is not a matter of considering them as adults, who they are not, but they are also persons and I need to establish relations with each of them that are symmetrical, I mean that I take into consideration what they say and what they want and they have also to take into consideration what I am saying and what I want. And for me it works. I think they much more transfer on the school environment what they have learned of authority in their family context. And also parents give them instructions: "be polite and use a formal language with your master as we taught you when dining with your father's grand-aunt". Well I don't know really, I imagine that sort of things... also the TV gives a lot of behaviour models.

MC

Group composition! It is a mystery. I don't know how they did but their group are well equilibrated, we listed together the criteria for forming a group: girls and boys, more advanced less advanced, talky and silent, etc. But honestly in a classroom this is an issue of insuperable importance, if we really could now something on how to organise groups, it would solve many problems. This is certainly a field where we need research.

MC

In my view, as far as teachers acceptance is concerned, I am pretty sure that previous experiences with the equipment previously distributed for instance the Nano Networks[1] and also PC-like machines can explain most of the reluctance. It represented a too high level of investment in terms of time and effort for making technoloogical tools one's own with a too low level of return in terms of practice in the classroom. I am not just talking, I was there.

MC

As for organisation of the classroom, I had a colleague who had a real "classe unique" in Engins few kilometres from Villard in an even more rural area than where we are here. A real "classe unique" that means 27 kids from 6 to 11 years old and belonging to the 5 different levels of Primary education. That is multilevel and multi-age. In spite of these a-priori difficult conditions, he was performing well in using computers in his classroom, thanks to the organisation in workshops imposed by the circumstances.

Paradoxically, multilevel and multi-age classes can offer a decisive advantage regard to technology uses not only respect to this organisation in workshops but also due to the fact that the elders can take in charge a large part of the computer literacy needed by the youngsters.

As a matter of fact I took him and his experience for model and he gave me the structuring of all the work activities he was conducting in his class. Unfortunately, I could not work that way. Finally I had to adapt and find my own way. And regard to handling technology means, I don't trust in standards, each one who wants to use technology tools in the classroom has to find her/his own way.

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[1] Nano Networks were networks of 16 bits Thomson MO5 computers (8 in average) connected to a PC-Like server where all the resources were available.

The experience of others is very useful because you can think of it, and also because some basic settings are required without which no use is possible. For instance, I am very suspicious regard to the capacity of Secondary Education to integrate technology use in a convincing form. I have seen my 3 children going through the College and the Lycee, and I think that the basic settings needed are not implemented in these environments for having there a real contributive use.

... Ho! yes! I was telling you that I failed in trying to reproduce my colleague experience, working into workshops was not enough to me. That is why I started the Contract story, which is a form of individualisation in the sense that if the contract is the same for everybody in terms of performance required, each kid can organise her/his work in the order s/he wants and organising her/his time freely. I minimised my control function a lot. Regard to this the group as such exerts a "moralising" pressure, because as a group they know that I will ask them why they have left their fellow-learner not to do her/his duty. Concretely they are responsible not only for their work but also for the work of the others. This has extremely positive effect I have been amazed of their capacity of autonomy.

MC

As a matter of fact I can concentrate on what makes problem to them and I try to find activities through which they can solve their difficulties by themselves. I don't find it good to say to a kid: you, you have difficulty with this or with that! Doing so you are installing references to their supposed limitations, when you know that within two months, the difficulty met will be overcame for reasons you rarely mastered.

Coming back with MC on the issues she raised during the Meeting at the District I asked her on the context of les Réseaux Buissonniers:

MC

It is sure that the concept of communication between schools or between classes doesn't individualise the exchange. They are too young, in my view, for having correspondence one to one whether it is with one correspondent or with several ones. In fact this fall concretely on the teachers shoulders. But the teachers are not enough organised at the moment for having a coordinated use of mail between the classes. And it may happen to my colleagues, like to me, to be overwhelmed and not able to follow-up. If you answer a mail three weeks after you have sent a message, you are no more interested in

receiving this answer. And indeed the kids were disappointed because they found their correspondent not reliable. But themselves they are too young for being reliable on these issues.

Another mistake we did, is that we were sending each other results of our work which were completely finished by our classes. When you receive a piece of material, say on "stars", it may be nice, you have a look at it, you read it, and so what? what can you do with this with your own pupils except send a "Bravo! Well done!" message? In fact the kids have nothing to answer to message that are in themselves conceived as "closed" and the senders feel unhappy since they have no the feedback they are expecting. As a matter of fact, we have to conceive "work in progress" status documents which offer real opportunities for exchange and collaboration.

JJ, a male colleague (would say Inger Lise) of MC, is also the father of the Lycee "star" for the WWW. JJ's son is one of the main animator of a kind of Junior Enterprise created inside the Lycee of Villard. Nobody dare pretend to speak HTML and Java better than him around. He is considered by professionals like a professional what in fact, at 16 years old, he really is. He seems to spend more time at producing Web sites for local institutions than to do his scholar work.

During a recreation in the schoolyard, JJ asked me on my progress and interests. I returned the question to him: How are you pleased with the learners and your using of IT with them in the classroom?

I must confess that I am not that happy... in fact in my class I am a bit unsatisfied. I did not succeed in organising properly the activities in a way that suits my pedagogical beliefs and the pedagogical features I think necessary and which enable, according to me, a contributive impact of technology facilities.

In my class at the moment I have them working on the Class Diary, which means writing, typing ad basic editing using computers. All that is now rather well integrated I would say. Remember that MC's pupils are elder than mine.

In fact my worry, is that I'm not able (but is it only my responsibility?) to have them communicating with others pupils of others classes of the network. I mean I have not found a proper way for involving them in communication activities since the messaging initiatives they have taken were not answered by any user of the network. This is very discouraging for young children aged 8-9.

J, another male colleague of MC, was among the pioneer in the initiative Les Réseaux Buissonniers.

I was really in favour of the use of IT. But honestly, it is the hell! I could not imagine how hard it could be to implement it. I really don't know how to say the real problem. May be it is a real bias in my pedagogical settings and beliefs. I don't know exactly what is wrong with me. I will be really pleased to discuss on it with you, may be it could help me to understand where is my problem.

As a matter of fact for myself I fully integrated the network and the use of IT for my professional need and this certainly changed my life :-) I used to be very messy, having always hundred of papers and document simultaneously opened on my desk and around, hundred of small notes as reminder. And that's for sure that using IT enabled me to better structure my own work environment. Well may be I exaggerate, but it is better ordered in my computer and in my office that I could imagine.

Indeed it is very positive, but as far pedagogical use is concerned I am far from having found my own way of using IT with my children, and I am really sincere if I tell you I'm pissed off!

Common to both JJ and J in nearly the first words I had separately with each of them, I felt that their problem was in a way a male problem: loosing control over their class was a central problem in terms of their affective interactions with the learners not in terms of exerting power over the pupils (from the pupils behaviour regard to each of them during the recreation, it was clear that both were adored by their pupils). As a matter of fact I felt that the risk of changing their behaviour and leaving the kids reorganise their affects in a configuration potentially less intense regard to their teacher was constituting an imaginary menace. I had the opportunity of discussing this hypothesis with both of them in the interviews they gave to me.

Sequences of MC's interview

How all that story began for you?

Initially it is J who told me about the experience. ... One time I have been sure that something concrete was preparing, I decided to join the initiative, then I attended to all meetings and then I surfed on the wave... and we are here!

I started in with playing with my Macintosh. In those circumstances, you need to find a pretext, I had to familiarise with the machine, so I started to test everything there was as software on the machine: word processor, spreadsheet, data base, the groupware we planned to use although no connection to the server was available at this time. And also games... I spent a very long and good time with games, it was legitimate (she laughs) I was in holidays. And believe it or not I learned a lot on computers through gambling. According to me this is the best training for taking in hand a computer. One time you know how to play, you know thousands of things on how works a computer.

Then we had the training organised by the Ministry: 15 days for initialising the process and in November we were all equiped. Then for training we had 5 weeks over the first year. And then 8 days the second year with more stress put on the technical aspect because the training sessions of the first year went too early on pedagogical aspects. You need time between the training sessions to learn something on the technical aspects and also you need a hot line, or a network of people that can help.

In practice, when you are using computers in the classroom is it for you less demanding, more demanding, more work, less work?

It is not less work, it's just different, but in the meantime before you reach this position there will be a period when you will have more work to do: you need mastering many things of the computers and if you don't have a minimal trunk it happens exactly what we want to avoid: you are spending your time to solve technology problems instead of having the children learning and playing and using technology for educational purpose.

How behave the institutional framework (your Ministry and its "armed arms")? What are their request to you? Have they any special request? Are you totally free? How does it work?

It is a bit as you have been told by the director of education the other day: if you want to do something in our institutional environment, it is better just to do it than asking for authorisation. And the same person who told you that, would like we (all the teachers involved in the network) work all together on the same thing at the same time. But we have seen the result when we were sending each other end-products which were interesting for no one of us, be they teachers or children! He is expecting from us a permanent use of the technology facility, He wants us to use it enormously, but as I see it, it is already the case!

And, in addition, this is one more paradox, but we are used to: representatives of the institution ask us to continue to work the traditional way. At the end you have the feeling they are overdoing, that they force you and also that they are not satisfied with what you do. In a way this is crazy: we are all volunteers, there, really interested, motivated and we already function as a network and manage at a large extent our activities and communication throughout technology.

From time to time I am asking myself: "How long would they like the children spent their time in front of a computer? and for doing what?" To be honest, I really wonder if they have just an idea of where they want us to go.

What is exactly your work process in the classroom with the children?

It would be a bit long. For short I told you I borrowed GG approach and applied in an homogeneous class the principles of heterogeneous class. I enriched it with my simple view on the contract which concerns compulsory work and activities and requires the commitment of each child. Depending of the matter, with each individual child, or with each group or with all the children of the class I verify what worked and what did not because it is to them to be the actors of their own knowledge building through controlling themselves their successes, their errors, their progresses. When I correct an exercise they check in their notebook, control their own answer and give me a feedback on what they have done. In order to be sure that all are going through all the exercises I check periodically how many have not yet finished to check this exercise or that one, if it is 3 or 4 of them I ask them

specially to complete it in order we can do the check on it. One time an activity has been completed by a child (that is he thinks he performed well in doing her/his task) s/he goes to next point of their contract according to what they have done already or not.

In fact I also give lessons, and then I ask them application exercise which imperatively they have to check individually with me and then we can go further to controls.

Why did you personally embark in that story?

I like change, I cannot stay doing and doing again the same things, and also I knew this time was the good one and that it would work well, that this time it would be really managed. I had in memory the nano-network which failed and I thought that there was something to do with computers with the children. I had some interrogations: what was better? Having computers in the classroom or having a computer room in the school? I wondered how are we going to do? And I thought it by groups as in a computer room. In fact, over all, I was thinking of "writing".

And what about educational software, I saw no one used?

With 30 kids, using educational software is not possible with just a stand-alone computer station, or even with 3 or 4. it is of no interest at all. When each child will have her/his own computer it will be time for me to check the interest of using educational software.

Through doing what you are doing with the child when using computers, what are exactly your pedagogical objectives?

As a matter of fact, nothing special. I just can formulate certain statements afterwards.

For instance:

- *they go deepen and further,*

- *they are more careful,*

- *they are immediately rewarded just through the work activity because what they are doing is immediately nice and clean and they do not depend on me for being rewarded,*

- *when they write I can obtain from them sentences that are correct,*

    their ideas are more constructed and they work frequently on a cooperative basis.

- *when writing, a notebook becomes rapidly unreadable for anybody, with their word processor they better manage the space of the page,*

- *better construct their stories,*

- *they structure themselves mentally clearly better,*

- *they better organise themselves.*

This is my experience.

At the beginning, leaving them interact brings a lot of change: they started to much more organise their work in common and communication between them increased dramatically. Initially they were forming groups with more than 4 of them, now they are reducing the number of participant to a group: 4 or usually less than 4. And for instance for "Le musée farfelu" they selected few pieces to write on and for writing they organised smaller groups.

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Some views expressed by the children

Val, **the reluctant**

In all the interviews I had with the children they were all happy of being working in workshops and of having their own contract to achieve, except one boy: Val.

"The contract, I don't like it, I prefer the traditional method. As far as I am concerned I prefer the methods where she explains to us and we listen to her. And also I don't like the new organisation of the classroom, it was better before when we were in-circle, may be that if in-circle I would like better the contract. In the beginning she tried to specialise the different areas of the classroom Maths here and Spelling there, now the groups are no more on this standard. Working in workshop, I really don't like because when you are in a group when each one is doing something different, I am absolutely alone."

He also questioned the interest of computer for communication, in fact his position, very exceptional was the one of a sceptical.

"With the computer I nearly never use it. From time to time she asks us we go there but she explains nothing, she tells us to look and see and memorise, but it is too fast. We don't know how to manipulate. I don't know how to send, I am a bit afraid to type, the more often I dictate and check. In fact for myself I do the strict minimum with the computer. Last year we have typed and sent a number of letters for our correspondents. I have also sent a message to my cousin, but he did not answered. He told me that he was seldom using the computer in his school."

Paul

I love to use a computer, it is the first thing that I would like to have on my own because it allows you to escape, in brief it allows you to act the hermit with a modem. I would be all the time drumming my fingers on the keyboard, making my homework.

The messages, the mistress talk of them to us and we answer that's all.

Maia

We give a hand to the other when it is difficult for them.

With the computer we do the diary, we write stories, we do drawings, et also it enables to correspond with other children, you can know other persons than those you know already and it may be an occasion to get interested in their lives, the place where they live and to travel and meet them.

With the Enginois we are exchanging messages. We have just seen him when e were t the Futuroscope, but on their side they were discussing between them with their class. And us we were discussing together.

For being frank, we have never received a mail by computer.

It is nevertheless magic the computer. We were so impressed at the beginning... we are no more impressed

I love it when I have a doubt, I go in the Menu Edit and it corrects everything, well not everything but you see what I mean.

We have made texts, games, drawings and then we send them. I don't know exactly to whom we've sent it, I think it is to the Enginois.

Robert

With MC each time we do something we send it to certain classes. With a computer you are in confidence for a letter it is not like a letter that can be lost, and also the answer goes faster.

And also we have gone to visit Internet with the mistress, it was in English.

Danny (boy)

I don't go frequently to the computer: we do presentation letters nothing more.

For me the computer is much more for working in group that for playing, it is not like at home where the computer is for playing.

Carine

Mostly what I do with the computer is typing.

Receive a personal letter that is very much better when you answer it is personal, you give your own opinion. I would like to have more correspondents and use more the computer. At the beginning it was very well. Now you feel more like freeing from the computer, you become addict. It is not good for everything for instance for better writing and for correcting your grammar and spelling. But I think that now some have regressed from the scholar level they had and other progressed. As far as I am concerned I have progressed.

Sylvia

I love typing with the computer.

When we are not interested by the message we receive we don't answer that's all. It is not often.

The computers indeed we go there frequently whenever it is possible except if we have nothing to do with it.

I have a lot of pleasure to use it. We have the right to use it only when we have finished our work because the work is the most important thing.

Those who are going frequently to use it don't pay anymore attention to it. But it is not the case for others who are not fully capable of using it and who don't go frequently to use it.

Mona

(question: Have you already been on the Internet?) Oh yes! Of course! ... (question: what is it?) ... it is a network... (question: what did you do, hat have you seen, of what do you remember) Well we went just on the Internet, and she told us "now we are on the Internet".

(question: Are you frequently using the computers?) In any case MC, as far as she is concerned, she is frequently working with the computers.

Thais

From time to time it is well for working but also for distraction.

I use it overall for typing and much less for learning something. But the computer it is difficult you have to find the letters this is not obvious.

Elisabeth

You are working and having fun together.

Now we are by group for working in group it is far better, we have the right to explain to the one who doesn't understand.

She less takes care of us than last year. (question: less or differently?) Well, differently, each time we need we go to see her.

Judith

MC, she doesn't come to see us and this is rather well... this means she is in confidence with us, when doing by contracts she doesn't know what we are doing.