

Classroom Management & ICT

For most teachers the term classroom management refers to the practical details that must be looked after if a pedagogic situation is going to actually run smoothly on a day to day basis. ICT has the potential to become a great and useful tool in the hands of skilled educators. Like any other tool it also has the potential to become a frustration and a burden if the teacher fails to learn how to use the tool correctly. All tools must be used well to realise their full potential, but they must also be managed well. Take a simple analogy: - a skilled carpenter can use a plane to smooth and finish a rough piece of timber. However if the plane is never sharpened or honed, if it is jarred against nails and generally mismanaged then the tool will cease to be of use for that person. You know the saying 'A skilled craftsman never blames the tools'. Much the same with ICT. The skills of using the tools are dealt with in various other chapters. We want to take a short look at management of the tools.

Much of classroom management is the common sense associated with dealing professionally with a subject. Most teachers probably know these practical ideas, but it always helps to see these things catalogued and noted. It is also simpler to add to a list of practical ideas once they have been started. Good classroom management is the actual implementation of as many of these practical objectives as possible, at any given time. Mismanagement will undoubtedly result in frustration and stress.

There are three main areas to be dealt with concerning ICT and classroom management.

- **Hardware Management**
- **Software Management**
- **Classroom Management**

The first two can be dealt with on very practical levels. The third can be very personalised and approaches will vary in accordance with the diverse skills, needs, objectives and experience of the teachers involved.

Hardware Management

How do you look after the tools of ICT so that this hardware (monitor, desktop or tower unit, keyboard, mouse etc.) will continue to be usable and useful. Good hardware management should include as many of the items from the checklist as possible.

- Try not to place the computer in direct sunlight. (This is just as important from a user point of view as from good hardware management)
- Tidy up the power cables and various input cables around the machinery. If the computer area begins to look like a spaghetti junction of wiring then sooner or later there will be some difficulty.
- Do not overload the power sockets. Many schools were built with inadequate numbers of power points. Management should be advised to add extra power outlets to the rooms rather than dangerously overloading existing points.
- Children's safety should be an issue. Perhaps adjusting the power points, unplugging etc. should not be delegated to the children.
- Consider attaching a multi-block extension to each computer table. (Some computer trolleys come with these attached and this is a great asset)
- Power surge protectors should be added to each outlet. This gives some protection to the equipment from electrical mishaps.
- Perhaps all machines should be unplugged at night, or at minimum sockets switched off. Some computer rooms have power breakers that control the supply to the room. Can this be switched off each evening.
- Modems in particular are sensitive to lightning and where possible should be unplugged at night, weekends and holidays.

- Think about the security issues of such valuable equipment. It may or may not be possible to store the hardware in a safe store.
- A list of the security numbers or serial numbers on all the hardware should be kept.
- Consider marking the hardware with some type of etching tool
- There are proprietary methods of locking equipment together, and locking equipment to the desks.
- Valuable hardware should ideally have dust covers. Machines could be covered each evening and especially during holiday periods.
- Reduce the visibility of hardware. An old curtain or a piece of material as a throw over would be just as good. This type of cover could act as a minimal security as well as a dust cover.
- Moving machines from room to room can be a difficult one to manage. With the best will in the world, monitors will topple, input/output cables at the rear of the hardware can be damaged as doorways are negotiated. Door saddles can give a nasty jolt to sensitive equipment. Move hardware only where absolutely necessary.
- Food and especially drinks should not be allowed near the hardware.
- Consider keeping some of the boxes and packaging that the hardware came in – just in case something needs to be returned for repair.

Software Management

This has more to do with the handling, storing & ordering of software, than the actual purchasing of software for the school. Software selection is dealt with in the area on Software Evaluation. The software in any school needs to be minded like any other resource material.

- Catalogue the software in the school. This should include a simple coding so that teachers can see at a glance what educational level the material is suitable for. The cataloguing could be on three separate files relating to junior, middle or senior material. These indexes could easily be cross-compared to maintain a balance on the supply of software to any particular level of the school or of the curriculum.
- Return CD Roms to their jewel cases, envelopes or filing cases. Children should be given responsibility for ordering and caring for the material they have used.
- Have a method of cleaning CD Roms available. Greasy finger marks can render CDs unreadable until they have been cleaned. Heavy scratching on the silver surface of CDs can also cause problems. CDs should not be left lying around without cases, otherwise it is inevitable that they will get damaged.
- CD Roms should be handled properly. This means that children should be taught to pick them up properly by the edges.
- Consider giving each child their own floppy disk for storing word processing or other material on.
- Set up folders on the hard drive for each class or each child. In some situations this might be the most useful method of storing work. Children would then be encouraged to save their material in a class file with a relevant file name, or in their own folder. Setting up a folder is dealt with in Phase 1.
- Data Storage facilities for maintaining large amounts of data should be considered. A Zip or Jaz drive might be useful (See section on Basics of First Line Maintenance.)
- Have a cross section of software types available. This means that varying teacher & pupil needs can be catered for. (A full list of the various software types can be found in the section on Software evaluation).

Classroom Management

The general area of classroom management probably includes a number of elements. These may relate or cross reference with hardware and software management, but have a real influence on the actual success or failure of managing ICT. WE need to examine a number of issues:

- Time Management
- Planning
- Integration

Time Management

Among the attributes of effective teachers was Time Management. As professional educators you have become adept at restructuring timetables to incorporate new ideas and procedures. The use of computers is a cross-curricular activity. Thus they should fit into an existing structure or be part of as many activities as possible. The questions arise:

'What do I do with the rest of the class while I am at the computer with 2/3 pupils?

'What use is one computer at the back of the room?'

This answer to these types of questions probably lies in the section on Planning. There is however one question on time management that is more difficult to resolve:

Should we have the computers in the classrooms or would it be better to have them all together in a computer room. In terms of Time Management it makes life much easier for the administrators to have a computer room as classes can be given allotted times to use the facility and larger numbers of children can have simultaneous hands on experience.

(10-Minute discussion on the pros and cons of utilising a computer room as an alternative to having the computers in the various classrooms.)

Different situations will suit different locations, facilities, preferences, teaching styles and the needs of the children. If we are serious about the integration of ICT into the curriculum then the ideal of having both dedicated rooms and access to computers in the classrooms should be considered.

Computer Room Vs Computer in the Classroom

1. Indicate what level of the school you are presently dealing with.
 - Junior
 - Middle
 - Senior
2. Have you used a computer room only?
 - Have you used computers in the classroom only?
 - Have you used both situations?
 - Have you used neither situation?
3. On a scale of 1-5 (5 being the best score) in which room did you feel most in control of the computer equipment.
 - Circle the appropriate score
 - Computer room 1 2 3 4 5
 - Computer in classroom 1 2 3 4 5
4. Would you say that:
 - In the computer room children were more or less attentive to the computer activity in hand
 - More
 - Less
5. Would you as a teacher
 - Prefer to use the computer room
 - Prefer to have the computer in the classroom
 - Prefer to have both options at various times
6. Which was the most productive in terms of hands on time
 - Computer room

Computer in Classroom

7. How many pupils attend the school?
8. How many computers in your school
9. Are your computers mainly
in a computer room
or in the classroom
10. Weekly hands on time for children (in hours)
Computer Room
Classroom
11. Circle one:
Urban
Rural
12. Circle one:
Mixed
Single Sex

Planning

Like any other part of the curriculum the ICT work must be structured and planned. This should be done in conjunction with school policy, the skill level of the teacher, the availability of suitable software and taking cognisance of pupil computer ratios. A number of practical considerations should be observed.

- Children often work better in 2/3 rather than individually. There are occasions where one computer/one child works best but be open to varying the situation.
- Position the computer in an area of the room that is visible to the teacher but with least class visibility. This cuts down on the distraction value of work in progress.
- Have a cross section of software models available.
- There are times when it is not a good idea to use the computer
- Limit the software base available to the children at any one time. Choice is fine but channel hopping with software will happen just as on the television. This often means that software packages are not given sufficient time to be useful educationally.
- Develop rota systems for access and or 'free time' access to the computer. You should log the people accessing the computer and monitor those who are either overusing or under utilising the facility.
- Have a clock near the computer so that children can monitor their own time at the equipment. This helps maintain the 'fair play' syndrome of 'I didn't get my turn yet Miss'
- Have a 2-4-piece headphone block available beside the computer to allow individuals or small groups operate in silence while the class may be engaged in other activities.
- Engage the skills of the many children with computer experience to help teach other children about various applications
- Have prepared instruction sheets for various lessons or activities
- As the teacher you should have experienced or simulated the exercises the children are being encouraged to undertake.
- Take class lessons to initiate use of various software packages
- Alternatively take the children in small groups until you have gone through the class
- Perhaps just teach a small group and ask them to spread the message down though the class
- Peer to peer learning can often be very effective
- Despite the considerable outlay, would a digital projector be a good investment for the school?
- Develop away from computer activities related to a particular project.
- Set up scoring charts for drill type software. This will help to monitor the progress of the children through an information retention exercise. More importantly it will help to monitor usage (Gender issues), (Overuse by abler children)
- Order relevant computer magazines for the school – PC Live, Irish Computer, Computer

Active, Technology in Education might be a few useful ones to start with.

- Meet with colleagues using the same software. Support Networks (within the school, inter school and within Education centres) Professional peer support is one of the most important aspects of this new technology.
- Be fully conversant with a software package before introducing it to the class. This runs from the very simple junior drill software (Play with it yourself before to hand it over to the children), to the more complex packages that may be used especially at the senior end of the school.
- Allow projects to be completed over a specified timeframe but be flexible.
- Buy a paper-binding machine for the school. Printed projects, books, leaflets, poems, e-mails can then be presented in a professional way and retained in the school or elsewhere as a shared data resource.

Integration

Look around – see how many of the work places of today have usefully integrated computers to some extent. We must do the same in an educational context. ICT is a new tool of education and by integrating the technology across as broad a range of the curriculum as possible we as educators are broadening the horizons of possibility for our pupils. What therefore does integration mean? Essentially it means that we use the software at our disposal to extend a broad range of skills in the children. The computer then is not only what the children learn about, it is what they learn through and perhaps with, even though part of the process may depend on computer usage. Children get access to multiple resources and multiple activities that will often demand collaboration. This collaborative approach will place demands on planning and teaching styles.

There are a number of frameworks for technology integration. One recent presentation that is very practical is the **NTeQ Model** as proposed by Deborah L. Lowthar and Gary R. Morrison in 1998, as part of project SMART.

This model sets a planning process for ICT lessons. This process has 10 stages:

1. Specify Objectives
2. What Computer functions will be used
3. Specify a problem to be solved
4. Plan how to manipulate and organise the data to solve the problem
5. How will the results be presented
6. Activities prior to using the computer
7. Activities while using the computer
8. Activities after using the computer
9. Supporting activities (At any stage of the project)
10. Evaluation of the learning, the software, the process and the outcome.

This model could be applied to pieces of software that you are already familiar with such as 'The Map Detective' or 'Tizzy's Toybox' so that using this software would be part of an integrated approach to ICT in the classrooms.

10-minute discussion on the one of the software packages in relation to the NteQ Model as a framework for technology integration.

A note on e-mail & WWW an Classroom Management

- Set up initial e-mail projects with local schools and colleagues.
- Develop a sorting policy for e-mail. Make the children aware of this policy and get them to help monitor incoming mail.
- Have strategies for dealing with spurious mail/spam/unsavoury material on the WWW or

in the e-mail.

- Delete obviously unwanted material immediately
- If children accidentally come upon spurious material have them report it to you and then delete the material, or move from the web site immediately
- Do not allow children open e-mail attachments without consulting the teacher
- Only allow access to the WWW in supervised situations
- Don't give out any personal details like addresses, phone numbers etc.on e-mail messages.
- Keep printed copy of interesting e-mails (use the binder to compile books of these)

Copyright

- The management of software must raise the issue of copyright
- Ensure that you have original software
- You may need to purchase site licences or network agreement for the school
- Under classroom management you may need to plan for your Management Information Systems (MIS)
- Information or data that you store on computer about staff, pupils etc. should be secure
- Access should be limited to those needing to know by password or other methods
- Under the Freedom of Information Act electronically stored data must be made available to recorded subjects
- You must register electronic data with the relevant body (There is a fee)

see the BECTA web site at – <http://www.becta.org>