

# 2 ICT in Physical Education

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## ICT to improve student learning

ICT should be utilised selectively within the learning context and should focus upon improving students' understanding and enthusiasm. The prime goal must reside with effective teaching and learning with ICT contributing to such a dynamic process.

It is important to remember that ICT is not a tool for learning but a medium for delivering pre-determined content. Lessons must be avoided where students simply search for and retrieve information with no prior learning outcomes being set by the teacher.

ICT allows the teacher to reconsider teaching and learning and frees the teaching from the constraints of the classroom and traditional teaching strategies. ICT is appealing to students and must surely be the preferred learning mode, given that the computer is often viewed as the 'child's machine'. If learning materials are designed around technologies, the student should be motivated by such opportunities.

The integration of ICT should promote and enhance learning by:

- Accessibility – bringing the world to the classroom.
- Involvement with technologies distinct from conventional methods.
- Accommodating the various paces of learning.
- Encouraging students to access and evaluate information from various sources.

Teaching strategies can be varied when integrating ICT and consideration should be given to:

- group work
- the operation of a cascade model whereby competent students are able to assist others in the use of ICT
- the limitations posed by a single screen when teaching the whole class.

Other issues to be considered when attempting to integrate ICT in learning include:

- The confidence levels of students in using ICT.
- Classroom management.
- The importance of focusing on the learning process not the tool.
- Diversity of the student group must be accounted for in planning.

## Technologies in Physical Education

ICT incorporates a vast array of hardware and software. The following technologies should be considered for use within PE for planning, administrative and teaching purposes:

- **Internet** – A global network providing the capability to communicate, share ideas and access information and resources from around the globe.
- **Intranet** – Similar to the Internet, but information from within a school or organisation.
- **CD-ROM** – Information is presented in the form of graphics and text with sound and moving video.
- **Wristwatch/heart rate monitors** – Usually a strap fits around the chest and contains a radio to transmit the heartbeat to the monitor in the wristwatch.
- **Digital camera** – The pictures taken are stored in computer memory rather than on film as in an ordinary camera. They can be displayed directly onto the computer monitor or imported into a graphics/art package for editing.
- **Generic software** – The most common forms are word processors and spreadsheets.
- **Video capture** – A video camera which can be connected to the computer. Video sequences or still images can be stored on disk and edited.
- **Data handling** – Information can be stored in a database.
- **Desktop publishing** – A combination of text, graphics and layout to produce a document.
- **Presentation software** – For example, Microsoft® PowerPoint – software displaying information in slide form.

The following forms are included to help with planning the use of ICT within PE:

- **Form 1** (page 6): PE department ICT equipment audit – Before you can plan lessons, you need to know what equipment you have access to and how it will work within PE. Use this form to make an audit of the equipment available to the PE department.
- **Form 2** (pages 7 to 9): Setting priorities for ICT in PE – Having made an audit of equipment available, use this form to focus attention on your priorities and targets.
- **Form 3** (page 10): ICT equipment booking form – Use this form to record who would like to use equipment and when.
- **Form 4** (page 11): Visiting a Web site – Use this form to check that the site(s) offer the material you expect. This is part of the good planning necessary to ensure that the use of ICT is worthwhile.

# Student task – Stroke analysis: Breaststroke

## Practical session

- 1 Swim two widths of breaststroke, legs only, using a float.
- 2 Repeat the same task to allow the observer to note details of the action.
- 3 Swim two widths of breaststroke, arms only, using a float.
- 4 Repeat the same task.
- 5 Swim two widths full stroke – repeat three times.
- 6 Performer and observer change roles.

## Follow-up session

Use the CD-ROM *Essential Steps to Swimming* to assist in the evaluation of the breaststroke technique:

- 1 Compare the performer's actions with the key points of good technique.
- 2 Tell the performer what he/she was doing well.
- 3 Write down the corrections that need to be made.

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Use the following questions to help with your observation.

Body position:

- Is the body flat, angled or bobbing?
- Are the shoulders horizontal?
- Is the head too high or held out of the water?

Leg action:

- Is the action wide, narrow or simultaneous?
- Is there a screw kick?
- On the kick, are the feet turned outwards?
- Are the ankles stiff or flexible?
- Do the heels come up to the bottom?

Arm action:

- Is the action wide, narrow or simultaneous?
- Do you see a bent or straight arm?
- Is the action beyond shoulder line?
- On the recovery are the elbows in/out?
- Are the palms up, facing or down?

General impressions of technique, including breathing:

# 8 Classroom management issues

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Despite the apprehension of many teachers faced with using ICT, the information age has gathered momentum, and Government initiatives are adding to the speed of change. The function of the teacher is evolving even if the purpose of ensuring effective learning in the classroom remains constant. New technology requires that teachers acquire new techniques.

As every student teacher will attest, there is a world of difference between classroom management in theory and classroom management in practice, and there is no substitute for experience. The same is true of managing ICT in PE – all the good advice available will never match the learning curve of classroom experience.

It would be foolish to attempt to predict every situation in which a teacher might find themselves whilst using ICT to teach PE, but there are a few basic ‘dos and don’ts’ that can help to avoid the more obvious pitfalls:

- **Know your students** – Prevention is better than cure, and it is easier to cater for the needs of a class, or an individual student, if you know them well. Potential conflicts are best dealt with before they occur. By knowing your students, you will be able to predict their reactions more accurately, modifying their behaviour whenever it threatens the learning outcomes you have set for the individual or the class. Determine the boundaries of what you will and will not accept, and decide the sanctions you will apply if ever the learning atmosphere of the classroom does not meet the standards you set.
- **Know your limitations** – Until you feel confident and competent with the equipment you intend to use, it is better to opt for relatively simple tasks. Overly ambitious activities, like overly ambitious aims, rarely produce even a satisfactory lesson, much less a good or excellent one. Develop confidence through training; discuss strategy, success and even disasters with working colleagues; but do not deny students their entitlement to ICT.
- **Play to the strengths of the class** – The average age of recognised computer experts is far lower than that of the average teacher. Use the ICT capabilities of students to your advantage. Allow those who can take responsibility for equipment and applications to do so. Students can be seated so that ‘expertise’ is available either nearby or not so readily at hand. You must decide which arrangement will best achieve the lesson objectives. Providing a variety of tasks that, through interest, expertise or experience, will put different students at an advantage at different times should be part of the planning process. Topics can be deliberately chosen to encourage contribution from particular students.