SPORTS TECHNOLOGY
YEAR TWO: Monday 11 May 1992
Review Meeting 1
Keith Lyons

1. INTRODUCTION

Good morning! It is quite a while since we last met. In the past month you have all been engaged in completing your project that combined work in pedagogy and technology. This morning I would like to discuss your experience of the project. I also want to start the process of revision for the Sports Technology examination.

2. PROJECT WORK

For about five months you have faced the problem of transforming a project idea into a project. Some of you may have been able to complete this work sooner than others. In some American circles, finishing off a piece of work and handing it in is called "getting it through the door". In my own work I have consistently experienced what I can now call a Toyota Effect (in the light of their current advertising campaign).

In the next twenty minutes or so I would like you to discuss with three others, your experience of the project in terms of:

1. The PROCESS involved (how you got your original idea, how it developed, how you collected data, how you produced the final version of the project).

2. The SKILLS needed (the range of skills you used, the most important skills, the skills you wished you had).

3. The PRODUCT of your work (the form and style of your project, presentational strategies employed).

At the end of your discussion I would like you to agree on an evaluation/reflection on the project that gives voice to all your views in respect of the three points and that helps us to focus attention on your work next year for your dissertation.

We hope that your project work has enabled you to think about long-term issues as well as completing the project for last Friday. Some of you may have used the project as a feasibility study for Year Three work. Perhaps all of you found the project a time of discovery not only about data collection but also your ownership of skills. I hope for some (all) of you the project has been a time of excitement about linking your knowledge of the practical aspects of sport with some of the issues we have raised in the technology part of the course.

We would welcome your advice about the kind of support you need in project work and ask that you conclude your discussion this morning with a brief written summary.

2. EXAMINATION REVISION

During the year you have moved through four teaching blocks. The staff involved have tried to provide a practical focus for the technology component. The examination questions you attempt to answer in Sports Technology will reflect our particular interests and points of emphasis. I want to start the process of revision with a discussion of VIDEO TECHNOLOGY.

I am acutely aware that the way I taught my part of the course changed over the two terms. What I want you all to reflect upon is how you used video as an instructional medium. I want to summarise some of the points I made about video and to encourage you to think about how a considered use of video technology can enhance your understanding of game events?

With some groups, in our first meeting, I tried to show a range of activities on video tape. My intention was to introduce some of the TECHNICAL and OPERATIONAL aspects of video as an educational technology medium. The purpose of the practical video use sessions was to encourage you to think about video as a local resource. In doing so I wanted you to be aware of the limits of DOMESTIC video equipment.

Our use of video in 1992 is linked to developments in photography and cinematography that date back to the early nineteenth century. The Museum of the Moving Image on London's South Bank has an interesting display of materials that relate to:

* the principle of the persistence of vision
* the photographic image
* projection

In 1872, for example,Eadweard Muybridge demonstrated that a horse sometimes has all four feet off the ground when trotting. A French physiologist Etienne-Jules Marey refined this work and developed a camera in 1881 that could take 12 pictures per second and then in 1885 a 100 pictures per second. Video technology has moved from a black and white reel to reel system in 1958 to a portable camcorder using electronic chips as imaging devices.

At Cardiff, we have the means to analyse video and high speed film and any project or dissertation you consider ought to have at least recognised the availability of such technology. I regard video as an excellent resource for movement analysis. Celia Brackenridge and John Alderson (1985), amongst others, have noted that such analysis aims to move from DESCRIPTION to MODELLING to PREDICTION. You ought to think about the observational skills you require to do this. What kind of evidence do you need?

It seems to me that the ability to identify patterns and regularities is something we all have to work on. Because of the limitations of our own memory, video technology has become an important tool in the analysis process. Analysis is an active

process. What can be observed depends on whether you observe a **real time event** or a **lapsed time event**. The latter implies you have a recording of the event that you can play and replay.

Analysis is often regarded as an OBJECTIVE process and is thought to exhibit some of the features of SCIENTIFIC ENDEAVOUR. We must also contrast analysis that might be described as PURE and that which can be described as APPLIED. We might also distinguish between QUANTITATIVE and QUALITATIVE approaches.

In my part of the course I was particularly interested in MATCH ANALYSIS. With different lecturers you focused on different concerns. You should be aware of the current interest in analysis. There are journals and books that publish more and more material about it. Three years ago I wrote a book about how video was contributing to some of this. The book is called The Use of Video in Sport and provides a number of examples of how people have used video to investigate sport.

During our time together, the purpose of the practical video use sessions was to encourage you to think about video as a local resource and one that needed practice.

In the talk I gave to the whole group in March, I wanted to discuss some issues linked to the significance of TECHNOLOGY for your development as students of human movement. I hoped to encourage you to think about the links between technology, observation and analysis.

Do you recall me noting that in a newsletter in 1986, the Council for Educational Technology (CET) observed that:

> Learning is at the very basis of all the work of educational technology, but there has been a tendency for people to link these words with equipment which is merely a delivery system, rather than remember that it is the improvement of learning itself that is at the heart of our aims.

The CET was formed in 1973 to promote the application and development of educational technology in all sectors of educational training. The CET define educational technology as:

> a rational, problem-solving approach to education and training based on a systematic application of the growing body of knowledge about the learning process and on the appropriate use of communications technology.

If you would like to follow up some of these issues, you might like to have a look at:

Derek Rowntree (1982) Educational Technology in Curriculum Development, Harper Row, London

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In my attempt to encourage you to think about how a Year Two Sports Technology course could meet some of these educational technology points, I used a video tape to trigger a discussion about technology, observation and analysis. In the tape, you saw: swimming; biomechanical analysis; dance; and team games. I selected a range of images from videos at my disposal. My aim was to produce a teaching resource that covered a range of activities. We have the facility to edit images and I wanted to use the video also as an example of the process of making and using a resource.

Educational technology encourages teachers and learners to be reflexive about teaching and learning. Hopefully both groups can be sensitive to David Warren's suggestion made almost twenty years ago that:

> Although sophisticated equipment can increase the potential of what may be taught, it does not of itself guarantee that more is learned. (unpublished SDU paper, 'Media and Educational Technology Units', 1973:8)

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3. CONCLUSION

Thank you for listening and contributing to this morning's session. My overriding concern is that learning is exciting and a voyage of discovery. During my short time at the Institute I have been struck forcibly by the potential for outstanding student work. Some of this year's third year dissertation work is outstanding. The challenge is to go beyond this standard!

It may be somewhat naive on a Monday morning to enthuse you about the joys of enquiry as a mode of learning but I hope that the best parts of your project work have given you a glimpse of this. As a staff we ought to work hard to support you in:

> the PROCESS, SKILLS and PRODUCT of research.

Next week we will conclude our course with Non Evans and Paul Harris reviewing their part of the course.

SPORTS TECHNOLOGY
Monday 2 March 1992

SPORTS TECHNOLOGY, OBSERVATION AND ANALYSIS

1. INTRODUCTION

Good morning! In today's talk I would like to discuss some issues linked to the rationale of the Sports Technology course. Since early October you have met three tutors for blocks of time. Our intention has been to share with you our experience of sport in a practical context. The whole group lectures have been designed to raise some important questions and to provide different perspectives on sports technology.

Today, I want to consider the significance of TECHNOLOGY for your development as students of human movement. By the end of this morning's talk I hope to have encouraged you to think about the links between technology, observation and analysis.

2. EDUCATIONAL TECHNOLOGY

In a newsletter in 1986, the Council for Educational Technology observed that:

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As you ponder these quotations here are two more!!
"In 1979, the headmistress of a Suffolk school asked a group of 22 children aged between 8 and 11 to write down in 15 minutes the titles of all the television programmes they liked. Between them they named 242 programmes, many of which they had not seen for some time. Of the titles in that list only one was a schools television programme." (R Moss, Video: The Educational Challenge, 1983:87)

"There is an important difference between just superficially looking at yourself and really doing so. It would appear that the average person probably 'keeps his distance' when casually viewing himself, whereas the videotape presents an 'uncensored' confrontation." (P Dowrick (ed), Using Video, 1983:101).

I want to encourage you to think about how a Year Two Sports Technology course can meet some of these educational technology points.

I would like to use a video tape to trigger a discussion about technology, observation and analysis. In the tape, you will see:

Swimming

Biomechanical Analysis

Dance

Team Games

I have selected a range of images from videos at my disposal. My aim was to produce a teaching resource that covered a range of activities. We have the facility to edit images and I wanted to use the video also as an example of the process of making and using a resource.

Educational technology encourages teachers and learners to be reflexive about teaching and learning. Hopefully both groups can be sensitive to David Warren's suggestion made almost twenty years ago that:

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3. OBSERVATION and ANALYSIS

In the video clips that follow perhaps you could work with the person next to you to share observation and analysis. Hopefully we can use the concept of 'active rest' to make the lecture more digestible.

TASKS:
Swimming: can you identify any key features of the strokes demonstrated

Dance: what did you make of the contrast in the dances seen?

Team games: identify some objectives to measure performance.

We have one more change of working groups to make after this week. In this course and in your core project we want to encourage you to be active in your use of technology.

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