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Interviewer	Wynne Brindle
Interviewees	Gill Kirkup
	John Naughton

TRANSCRIPT OF EDITED PROGRAMME

OPEN FORUM opening title sequence. Box wipe to WS studio	MUSIC	MUSIC 
MS Susan Blackmore sitting at desk	SUSAN BLACKMORE: Hello, in today's programme we shall be looking at one of the major questions currently effecting the Open University and higher education. How the spread of home computers has suddenly opened a wealth of new opportunities for teaching at a distance. We examine how the OU is responding to this challenge. We'll also be looking at subjects that have traditionally been a male preserve,	
z/i to MCU Susan	to ask what's being done to make them accessible, and indeed, attractive to women. And we'll be meeting two more OU students at different stages of their degrees. But first, home computers. Wynne.	
WS studio		

MS Wynne Brindle

WYNNE BRINDLE:

The extent to which home computers are destined to change distance learning can be measured by the quote from the Dean of Technology at the OU, Geoff Peters, who proclaims that we are now entering the third age of distance learning. The first being through correspondence texts, the second multi media and the third steered by the role of the home computer. Later on I'll be joined by John Naughton the Chairman of the New Technology Foundation course, T102, which plans to give the home computer a revolutionary new role in its teaching. I'll also be raising some of the issues involved with Gill Kirkup, of the IET, who's carried up some key research on computers in the home.

z/i to MCU Wynne

But what's brought these changes on us at such short notice, and what choices remain as the technological 'Pandora's box' reveals its selection of computing miracles.

MUSIC

WYNNE BRINDLE contd:

It was the success of the silicon chip industry in the 1970s that signalled the new era in calculators and computers.

('HORIZON' insert)

MCU computer circuit board

CU of same

BCU of same

The multitude of tiny circuits which could be implanted on a piece of silicon was clearly a technological marvel. But what made the micro-circuitry so important was that the cost of manufacture were plummeting. In 1978 a celebrated 'Horizon' documentary captured the scale of impending revolution with great force.

Graphics, mosaic wording of CHIPS appears

Full title appears 'Now the CHIPS are down'

'HORIZON' narrator

MS hands holding computer circuit board

z/i to CU of board

This is the size of a computer today. As powerful as the biggest of only a few years ago but a thousand times cheaper.

What makes it possible is this -

CU hands holding piece of board

Mix to BCU hand, silicon chip on finger

inside here is a silicon chip with all the important components of the computer etched onto its tiny surface.

Mix to VBCU silicon chip

Pan R-L across petrol pump digital readout

CU typewriter

WYNNE BRINDLE:

The economy of such devices relied on their widespread application and the world quickly responded with new uses springing up all around. But it was one particular device that was to herald the breakthrough in personalised computing.

z/o revealing office, lady using word processor COF

LA/MS lady using word processor

'HORIZON' narrator

There's a new machine coming into use, it's called a word processor and it's probably a more important step than the invention of the typewriter.

MS fir cone on shelf, z/o to reveal man working at word processor

MS computer screen with words rolling through screen

MCU man with pipe in mouth

WYNNE BRINDLE:

Nowadays, the word processing function is recognised as an important ingredient of home computing. The strength of a word processor is that not only can text be easily changed and patterned, but it can also be stored and printed out at will. Programmes can also be acquired for different tasks, such as correcting errors.

WYNNE BRINDLE V/O contd:

So the word processing function was the first stage in establishing the home computer as a serious educational aid.

TV screen with words rolling through screen

Screen rolls to L of frame (Quantel)

But for a home computer to be an effective teaching aid it is important to be able to link across to other computers - say in the teaching institution. This can be achieved by means of a disk by which programmes, or data, can be carried across or sent to another computer.

MS man at word processor frame slides to L

CU disc drive, Quantel sequence rolls pictures

A further dimension in communication is possible by linking in to the telephone system via a device called a Modem. In 1986 the OU course on software engineering, PMT 600, used this process to link the student to the central computer at Milton Keynes and importantly also to tutors. To David Mac Connell who evaluted the course, the communication with tutors fills a key role.

z/i to box with telephone bottom of frame

MS David MacConnell at computer desk, frame slides to L

DAVID MacCONNELL:

At the moment on software engineering students don't have face to face tutorials. They can only communicate with the tutor by ringing him or her up. That causes problems because you may want to ring a tutor when they're not available. By using this home experiment facility students can link in to a computer at Milton Keynes, leave messages on that computer and their tutor can read the messages whenever they link in.

MCU Jane Henry

JANE HENRY:

What kind of equipment do you need to access this system?

MS David MacConnell sat at computer

DAVID MacCONNELL:

Well - basically the equipment in front of me which is provided by the Open University. There's this keyboard here Hecta3 micro computer, which is linked to this device, called a modem which is linked to a telephone, and linked to a television set.

DAVID MacCONNELL contd:
All of this allows you to dial up a computer - type in messages to the computer and they're still there until someone logs in and reads your message.

JANE HENRY V/O:
Can you show us?

DAVID MacCONNELL:
Yes, certainly. What you would do is, we provide a number for students to ring which they can dial up from their home on cheap rate calls, that links the students into the deck 20 computer at Milton Keynes and we just have to wait for that number to be connected - once you've linked in you get a special tone, you press the button on the modem - here we go - and the student has to wait until they get a - the go ahead on the television screen to tell them that they are connected.

CU telephone/modem, fingers press numbers

MS David MacConnel at computer

CU telephone, hand replaces receiver

MS David MacConnel at computer

CU computer screen

O/S MS man at computer

CU computer screen/variety of wording appears on screen

MS (side view) man at computer

BCU top of computer screen

A/A - bottom of screen

CU computer screen

MCU Robin Mason

WYNNE BRINDLE V/O:

DT200, the Information Technology Course is due to start in 1988. The course team is currently exploring the possibility of a more 'user friendly interface' to electronic mail systems. Students will study something about the computer system as well as how information technology systems are now being used in places likes banks and social security. But how is this mode of operation worked out in practice? Robin Mason has made a study of the first year of PMT 600, the software engineering course.

ROBIN MASON:

The first thing that we've discovered is that we must make the use of computer communication integral to the assessment of the course. It cannot just be an add on otherwise it becomes something that students will just - a few students will use but by far the majority will just ignore it. So on DT200 we have made it an integral part of the course.

ROBIN MASON contd:
It is integral to the material on the course as well as the assessment. And we know our students need that to get using it.

And the second thing which is even more important possibly is that we know from PMT600 that it must be easily to use initially. It must be very easy to log on to get up and going, to feel confident in sending messages and communicating in this new way. And for that reason with DT200 we have spent a lot of effort in developing an easy to use front end to the system so that - its - it draws students to use it rather than a detriment in a difficulty in getting on.

WYNNE BRINDLE V/O:
However, there is one more key ingredient if the home computer revolution is truly to represent a third age of distance learning. That ingredient is the idea of universality or equal rights to a computer for all students.

Quantel sequence showing 3 boxes with different pics

z/i to box showing high street

WYNNE BRINDLE V/O:

LS down high street, pans R to computer shop

Most high streets now boast at least one shop with an array of home computers. But at a cost well into the hundreds this still remains a fairly exclusive market. Although competition, together with refinements in the technology, will surely bring prices within the reach of the man in the street, the Open University senate has taken the view that it should wait no longer before introducing home computing on a much wider front. In 1986 a paper was presented to sell it setting out why the new technology foundation course should include home computers as an essential teaching aid. It lists both the tasks they might perform and the wider need for computers as a springboard to higher level courses. Senate took a major step in November by approving the plan in principle, but this still left many questions un answered.

MCU shop window with computers, tilts up across window

LA/MCU man

CU Amstrad computer kwyboard, pans R across

CU 'OU' paper, tilts down over paper

MCU 'OU' paper, z/i to heading

3-SHOT STUDIO
WYNNE, JOHN NAUGHTON
AND GILL KIRKUP

MS John Naughton

MS Gill Kirkup

MS Wynne Brindle

MS John

MS Wynne

MS John

WYNNE BRINDLE:

Well, I'd like to look at some of the issues now with John Naughton, Chairman of T102, and Gill Kirkup of the Institute of Educational Technology. John let me turn to you first. Senate's debate was a very lively affair with your colleagues in the Technology faculty responding to a three line whip to vote for the resolution but there were some opponents - notably the Vice Chancellor. But why is the faculty so hell-bent on computing for foundation course students?

JOHN NAUGHTON:

Well, first of all it wasn't a three line whip, it may have looked like that but it wasn't. What, the turn out from the Technolgy faculty really was a reflection of the concern that academics have in technology and the reason we're concerned, the reason we're pushing so hard is because it's our academic incredibility that's on the line.

JOHN NAUGHTON contd:

In my case, for example, I'm Chairman of the Foundation course which has to last until the 1990s. I cannot conceive of a technology foundation course in 1992 which does not say, which does not have as an integral part the dominant technology of the late twentieth century. I just can't conceive

MS Wynne

MS John

of it and I don't think other educational institutions could conceive of it either.

WYNNE BRINDLE:

Is one of the problems for students though going to be the cost of this exercise?

MCU Wynne

JOHN NAUGHTON:

MCU John

I think cost has been a dominant feature in the discussions about it all along. The problem is that the technology we feel is needed for teaching purposes is, is more expensive than we would like. It's also too expensive for the university to carry the whole burden itself, so some way has to be found of sharing the burden out.

JOHN NAUGHTON contd:

And unfortunately, but I think that is the reality of it students have to accept some of the cost just as the Univeristy has to and just as probably the Government has to. It has to be a package and I think the burden has to be shared but there is going to be a burden.

WYNNE BRINDLE:

MCU Wynne

Gill, are you going to accept everything that John said?

GILL KIRKUP:

MCU Gill

No, I think the cost issue and our whole area of open access as the Open University is a really sticky one. We already know, for example, that our students tend to be richer that um - a general cross section of the population. For instance, our students are likely to own a telephone, over maybe 90% of our

MCU Wynne

MCU Gill

students own a telephone. Perhaps only 80% of the population do. I'm worried that this another barrier, a financial barrier even if we manage to cut the cost from an actual cost to much less. It's another financial barrier.

WYNNE BRINDLE:

MCU John
MCU Wynne

Uh John, uh should the Open University be an innovator in this field, if the future .....

JOHN NAUGHTON:

MCU John

Of course, of course it should be an innovator. The whole point of the Open University was to give people who would not otherwise have access to university education the best that money and brains could buy. And the whole point of the OU has always been in my opinion, why not the best for our students. Why should we accept second best, and in the 1990s other educational students, every college of further education in the land will be giving its students micro computers or will be getting them to use micro computers for teaching purposes. Every university, every polytechnic, perhaps even every . Why shouldn't Open University students have it?

WYNNE BRINDLE:

MCU Wynne

Gill, why shouldn't?

GILL KIRKUP:

MCU Gill

I'm not so sure that it's an area John thinks is actually about to happen. Um, for instance, I don't think it has been proved that computers in the domestic environment have been much more than at best, word processors. And for the majority of people not even that but glorified games machines. I think John is, is jumping ahead faster than the actual social use of computer's merits. And I'm not sure that the best way to present or to deliver our educational product at the moment is through computing.

JOHN NAUGHTON:

MCU John

One of the misconceptions is once you start talking about computers at the moment in the OU environment it takes over the discussion and everything else becomes second. But in fact in our case we see the computer as just another new teaching media. As a study too, not as the main of ranking. We will

MCU Gill

continue to develop and produce

MCU John

high quality correspondence t

JOHN NAUGHTON contd:

We will continue to develop and produce radio programmes, television programmes, cassettes, video tapes and so on as appropriate. But we are going to grasp the opportunity to add to this a new and rather powerful teaching medium. It is

MCU Wynne

MCU John

an addition, not a replacement for other things.

GILL KIRKUP:

MCU Gill

But it is true that it isn't going to be an optional medium for the student. A student can't do T102 without access to the computer so in that sense it's not an optional

MCU John

medium for them.

MCU Gill

WYNNE BRINDLE:

Gill, what about women. Technology

MCU Wynne

always had a very good record of attracting women students.

GILL KIRKUP:

MCU Gill

That's right, that's right. What concerns me is that the information we have about women is that they're not very impressed with computers,

GILL KIRKUP contd:

Um, for instance we have much less than 20% of women students wanting to do the digital computer which is the second level course. I am worried that this is not an optional piece of teaching material. You can't manage the course without it and that it might reduce the proportion of women students. Other research in other places has shown that women just find that working with computers very inaccessible and put in an environment, especially the domestic environment, which is where it gets really tricky - um, where there are other men in the family around women get very little chance to work on the machine. It is in fact, as your, your clip said, it's a machine so far for the man in the street. And the woman in the street has seen very little of it.

MCU John

MCU Gill

WYNNE BRINDLE:

Thank you both very much indeed. So it's into the unknown and I'm sure we'll be returning to that subject in a later programme.

3S Wynne, Gill, John

MS Wynne, turns

MS Susan behind desk

SUSAN BLACKMORE:
As Gill Kirkup has been saying the University is keen to improve the proportion of women students in traditionally male dominated subjects, such as technology and computer science. There is in the OU a group known as Women into Science and Engineering, WISE for short, which aims to improve access and support for women students on related courses. This group was set up in 1984 as part of a national campaign sponsored jointly by the Engineering Council and the Equal Opportunities Commission, whose Chairman is Baroness Platt. She has written the forward to a new OU booklet called 'Career Wise' which is soon to be launched.

Susan picks up booklet

CU booklet

WA/LS over audience at conference

Lady Platt recently took part in a public discussion on Equal Opportunities.

BARONESS PLATT:
You would expect me today particularly to be talking about girls. Very often their mothers will say to them 'Oh well, never mind dear. I should just learn to type, they'll always be a job for you'.

MS Baroness Platt

MLS people in audience

MS people in audience

MS Baroness Platt

BARONESS PLATT contd:
Well, we all know that typing skills are not going to be the ones in demand. Time for a career in the new technologies, where the scarce skills market will be operating and one of my new things is, they used to say diamonds were a girl's best friend, well you can only sell diamonds once. You can sell scarce skills every week and every month probably for the rest of your lives and so girls have go to take that into account.

WA speakers on stage

MWA stage, Chantel Cuer COF

LS across hall to stage

MS Chantel Cuer

WYNNE BRINDLE:
Baronness Platt speaking at the all European People and Technology Conference. In a panel discussion on the impact of new technologies on education and training. Shared by Chantel Cuer the panel included experiments on vocational training from four European countries. Delegates comments echoed their concerns.

MWA top of heads, Nikki Henrique, holding mike COF

NIKKI HENRIQUES:
My name is Nikki Henriques. I'm a founder member of an organisation called 'Women into Engineering Science and Technology'.

NIKKI HENRIQUES contd:

We go into schools as career advisors, and things like that, and what were finding is even if girls and women do actually break the barrier and they go and they do the training in engineering science and technology, they come up against sexist discrimination of all kinds. I, myself, did a TOPS course in motor mechanics in 1976, came up against it and unfortunately the picture hasn't changed 10 years later. I would

MS Chantel Cuer

put forward an idea to some of the people in the room that if they go

WA speakers on stage

back and consider the training of women that they actually look at establishing training course for trainers within their organisations to stop this sexism. Women learn

2S, men in audience

very quickly that a course in a particular area is not suitable for

CU man in audience

them because they're going to come up against a lot discrimination and

MLS Nikki Henrique COF

they won't come forward. If you encourage them you'll attract them, they will come forward and they will participate in the courses that are provided.

NIKKI HENRIQUES contd:
But you have to look at a different way of training.

WA speaker

CHANTEL CUER:
Thank you Baroness Platt.

BARONESS PLATT:
You need equal opportunities policies in the schools so that it's expected that girls will do problem solving, girls will do technical things. Otherwise at home girls will only play and work with soft materials, they won't work with hard materials and so the necessity even at primary schools should make sure that the girls and the boys do the same thing in technological terms. The same thing is true in the secondary schools, you want them to keep up craft design and technology. Their physics, their mathematics at least until the age of sixteen. In this country we've had what we call the 'wise campaign', women into science and engineering which has raised awareness of those sort of things.

MS Baroness Platt, pulls out to 2S

MCU woman in audience - chewing

2S Baroness Platt and gentleman

MWA men in audience

2S men in audience

CU man in audience

2S Wynne and Gill

MCU Gill

WYNNE BRINDLE:
Gill, Baroness Platt was being particularly optimistic about getting women into training. How successful has the Open University been?

GILL KIRKUP:
Well, I think we've always thought that we were very successfully because when we've looked at the general proportion of our students that are women, and roughly 45% of students doing undergraduate courses are women, and so we think well that's pretty good. We really got it almost 50, 50. But if we look at those courses which are vocational and the courses which are in the science, the maths and technology. Then we've not been doing very well.

2S Wynne and Gill

WYNNE BRINDLE:
So, we should be having more special initiatives for women?

MCU Gill

GILL KIRKUP:
I think so, I think there are a whole range of different initiatives we could be trying. At the moment we have two initiatives going.

GILL KIRKUP contd:
Both of which are quite small and both of which have been funded by the Manpower Services Commission.

MCU Wynne
MCU Gill

One is a set of bursary schemes offered to women who have a career break, to pay them through technology courses but that only covers 60 women in a year. We also now have a small course which is going out on open access in, I think this summer, called 'Women into Management', which is a very preparatory course for women who want to get into the management school, the business school courses and particularly beginning the course called 'The Effective Manager', but these themselves are very small individual initiatives.

MS Wynne

WYNNE BRINDLE:

2S Wynne and Gill

Gill Kirkup, thank you very much indeed. Susan.

MCU SUSAN

SUSAN BLACKMORE:
In the last programme we met two students who joined the OU with their sights on science and technology degrees, although Ray Squires veered towards Social Sciences later on.

SUSAN BLACKMORE contd:
This week we're going to meet two people who have both chosen to study Arts, but for very different reasons.

Quantel sequence with boxes showing MCU students, finishes with PROFILES titles on screen

SUSAN BLACKMORE V/O:
By St John's gate, off the Clerkenwell Road in East London lies a picturesque little precinct called St John's Square. Last month Shirley Ascough moved to this colourful corner of the City to start a new phase in fast changing career.

Frame dissolves to top of arch, tilts down to reveal St John's Gate. Shirley Ascough enters COF, tracking shot as she walks along streets

SHIRLEY ASCOUGH V/O:
I was lecturing at Salford College of Technology on a B-Tech high national diploma course in home economics and I left there at the end of last year and I'm now working for the Meat and Livestock Commission as their Consumer and Education Officer. I was trained as a teacher originally and at the moment, of course, all teachers are now graduates. Or the training teachers have to be graduates.

MWA glass doorway, Shirley enters frame. z/i to numbers/name on door

MLS tracking shot Shirley along corridor into own office, settles at desk

SHIRLEY ASCOUGH V/O contd:
So I decided I ought to be one too, and I looked around in the local area, Manchester where I was living at the time and I didn't find any part-time courses that took my fancy, and uh - so that's why I joined the OU.

SUSAN BLACKMORE V/O:
But Shirley didn't plan her OU degree solely in career terms.

SHIRLEY ASCOUGH:
MCU Shirley Ascough
I started with the Arts Foundation course, originally I was going to do the Science and Technology in fact because that was more closely related to work. In the end I'm very pleased I didn't, because I think the saving grace was the fact that it wasn't related to work and I was quite happy to spend the time doing it then. So I took the Arts foundation course, the next year I took the enlightment, last year I took elements of music and art in 15th century Renaissance Italy.

MLS through offices showing Shirley and one other in office

SHIRLEY ASCOUGH contd:

I was teaching Home Economics at the time so nothing related to Arts courses really but I did find myself using all sorts of interesting information as examples to illustrate this, that and the other. So it did help very loosely but I think in the long term it's vital because if I decide to go back into education then I certainly wouldn't return without a degree. And I don't think the fact that it's going to be, to give you a degree at the end was sufficient motivation to keep me going with all the hours of work and because it was a change from work I think that was the saving grace. I didn't begrudge spending any of the time at weekends and evenings working - because it was a complete change.

Shirley walks fwd to filing cabinet, leaves frame L

WA street cafe

CU cafe table, tilts up to MCU Shirley sat at table

MS Shirley at cafe table

STEPHEN OXLEY:

Cuts to MCU Stephen Oxley

A life free of reverses was not the fate of Catmus nor of godlike Pelius nor of Heir Hitler, sat high in the Olympic Stadium, reft of his portion of bliss, because the athlete's Owens black, black as the coal .....

2S Stephen and Richard Howey

SUSAN BLACKMORE V/O:
Stephen Oxley's life revolves around the Arts.

STEHPEN OXLEY:
In the many old galleys, in Hamburg - no, in the Keel canal.

SUSAN BLACKMORE V/O:
When he joined the Open University his aim was to take a range of Arts courses that would directly help his career. As an actor he found the OU system particularly congenial.

3S Stephen Oxley, Roland Rees and Richard Howey

STEPHEN OXLEY:
When I started certainly I had quite a bit of spare time. A common experience for most actors, and I felt that this time could be more usefully filled, rather than sitting at home waiting for the phone to ring. So that was one reason. But the other reason is that I am taking up a career as a director, or at least developing parallel career as a director - a theatre director that is and indeed I've started since, since starting with the OU I've done a couple of directing jobs working at the London Theatre School.

MCU Stephen Oxley

STEPHEN OXLEY contd:

And obviously from the point of view of an employer, if you've got a degree that kind of qualification is going to be useful.

3S Richard, Roland and Stephen

(Roland Rees - 'And this is, you've never said this to him, when he was teaching you.....')

The director of the play that I'm doing at the moment, 'Needles of Light', Roland Rees, has done an enormous amount of research on the play and has become an authority on the Spanish civil war, and if the play is to be accurate then that research is essential.

2S Richard and Stephen

SUSAN BLACKMORE V/O:

MWA front of UPSTREAM Theatre Club

Stephen is due to complete his degree in about 1990, and we shall be following how far his OU studies help him realise his ambition either as an actor or as a director.

WA THE YOUNG VIC theatre

MWA stage door of THE OLD VIC

(IN VISION)

MS Susan Blackmore behind desk in studio

Our next programme will be on March 29. Until then, goodbye.

CHYRON ROLLER
End credits over black screen

Presenters
Dr Susan Blackmore
Wynne Brindle

Production Assistants
Margaret Hulse
Liz Sugden
Suzanne Brenner

Designer
Patrick Tottle

Location Camera Unit
Camera Supervisor
John Cassidy

Sound
Mike Heald
Colin Tugwood

VT Editor
John Bullard

Film Cameraman
John Harrison
Rex Maidment
Roger Twyman

Film Sound Recordists
Graham Bedwell
George Cassidy
Les Collins

Film Editor
Lawrence Williamson

Producers
Roger Tucker
Andrew Millington

A Production for the Open University

FADE TO BLACK