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# Topic 1

## Introduction

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### ***Learning Objectives***

- *Appreciation of the difference between School and Higher Education*
- *Understanding of what is expected of a student undertaking Higher Education*
- *Awareness of the wealth of information available to today's scholars*
- *Familiarity with the background to the "Case of the Killer Robot" case study*

*Only you yourself can be your liberator! (Reich 1945)*

## **1.1 The meaning of *praxis***

You are probably wondering what this thing called *praxis* is all about and why it is regarded as an important part of a degree course in Information Technology of all things. This topic will attempt to sate your curiosity and provide you with satisfactory answers to these very reasonable questions.

One thing you will not be told in these pages is what *praxis* means. You will be asked to answer that question for yourself as your first assignment in this topic. The remainder of this topic is concerned with matters which are part of the praxis of Higher Education and being a student. Hopefully you will recognise this once you have discovered what the term *praxis* actually means.

## **1.2 Schooling versus learning**

This course is probably your first experience of Higher Education and the only educational process that you will be familiar with is that which you met at school. Higher, or University, Education is very different from Schooling. The dual aims of this topic are to demonstrate the difference between the two and introduce you to the more demanding expectations of Higher Education.

The quote from Reich at the start of this topic might seem a bit trite but Higher Education is one way in which you really can liberate yourself. No doubt you appreciate this already and it's probably the reason you have enrolled on this course. In studying for an academic degree you will be exposed to new ideas and new ways of thinking about things and this, in itself, will be intellectually liberating. Also, once you graduate, the career opportunities which will be available to you will be greatly enhanced and this can liberate you in all sorts of ways - more control over your daily work, more rewarding and creative work, greater appreciation of your work and remuneration for it.

Consider the following definitions taken from the Oxford English Dictionary -

<b>Student</b>	Person studying in order to qualify himself for some occupation, or devoting himself to some branch of learning or investigation, or under instruction at university or other place of higher education.
<b>Degree</b>	Academic rank conferred as mark of proficiency.
<b>Graduate</b>	One who holds an academic degree, or has completed a programme of study.
<b>University</b>	Educational institution designed for instruction or examination or both, of students in all or many of the more important branches of advanced learning.

Notice how the definitions are couched in Schooling terms - "qualify", "instruction", "examination". Is this really all that University, or Higher, Education is about? What about broadening one's horizons or the latest research findings? Should they not figure in the definitions somewhere?

Consider the following paragraph written by Ivan Illich -

*Many students ... intuitively know what the schools do for them. They school them to confuse process and substance. Once these become blurred, a new logic is assumed: the more treatment there is, the better are the results; or, escalation leads to success. The pupil is thereby 'schooled' to confuse teaching with learning, grade advancement with education, a diploma with competence, and fluency with the ability to say something new. (Illich 1971)*

Illich wrote this piece quite a few years ago but he would probably not change it much if he were to re-write it today. You might think he is being a bit harsh on schools and schooling. Indeed, your own school experience might have been quite different to that which he describes. Take another look at that last sentence though and ignore the controversial suggestion that schools might be conspiring to deliberately confuse their pupils. Now ask yourself the following questions -

- In how many of the subjects I took at school did I have a strong desire to learn more and in how many did I merely turn up to be taught?
- Was I actively seeking an education at school or did I just attend because that's what young people do?
- In how many of the subjects for which I hold a qualification do I feel at all competent? In how many would it be possible for me to make an original contribution to knowledge?

Hopefully your answers to these questions will at least lead you to concede that Illich's description has some truth in it, even if you think he might be overstating things somewhat. You might be of the opinion that what he describes is the way education has to be when dealing with large classes of young children. There are clearly many issues to be considered in any debate about school education but to consider them here would be to digress from the main purpose of this discussion. That purpose was to arrive at a key point upon which we should all agree -

**Whilst we might tolerate, or even advocate, in our schools the educational process which Illich describes we could not countenance its application in our universities and this is the single most important thing which distinguishes Higher Education from Schooling.**

## 1.3 Being a student

It is absolutely crucial to your success in Higher Education that you understand what is expected of a student. The following descriptions are provided to help you contrast the expectations of the lecturers you will meet in Higher Education with those of the teachers you probably met in school -

### **Higher Education**

Students discover information for themselves and critically assess it. Understanding the material is crucial. De-schooling, in Illich's sense, might be a necessary part of this process.

### **Schooling**

Teachers organise and deliver up the information. Pupils are assessed on their ability to reproduce it and apply it in very specific ways. Understanding of the material is useful to a pupil but not always essential to examination success.

As a student, you will be expected to use your initiative. You will sometimes be confronted with investigating a subject which is rather ill-defined. Whereas a school pupil might ask "Where do I start?" of their teacher, a student would be expected to work out the answer to that question for themselves or, at the very least, suggest a answer to their lecturer for confirmation, such as "I was planning to start with X and then go on to consider Y and Z. Would this be appropriate in your opinion?"

As a student you will be expected to organise your thoughts and ideas in a manner that makes them intelligible to others. When investigating a subject you are likely to discover many accounts from a variety of sources. Organising this information sensibly is essential to gaining an understanding of it.

As a student you will be expected to critically assess any information you acquire. How up to date it is, how reliable the source appears to be, whether it corroborates, or is itself corroborated by, other information you have obtained or whether it sits in splendid isolation. How professional does it seem? Sloppy use of language and poor presentation are suggestive of an unprofessional, and therefore potentially unreliable, source. You would do well to remember this point when producing your own work.

## 1.4 Information sources

As a 21st century student you have ready access to considerably more information than students in previous centuries. Libraries remain the most reliable sources of information. It is very rare for incorrect information to enter their portals. Libraries provide access to a lot more materials than you might realise. They collaborate with each other and you

can order materials from one library which might be held at another library (but there might be a small fee incurred in this). Libraries use quite a bit of information technology too. If you haven't already done so, now would be a good time to obtain instruction from your library on how to search their catalogues and ask about other external materials which they might be able to supply to you.

The World Wide Web (WWW) is an enormous repository of information which is rapidly becoming indispensable to modern scholars. Beware though, there is a lot of dubious information on the WWW. When seeking information, make sure you are accessing reputable organisations such as universities, research institutes and, of course, libraries.

Always cite your sources. References must give sufficient information for others to be able to locate or obtain your source. Referencing information gleaned from the WWW can be problematic. Web sites are transient in nature - here today, gone tomorrow. Whenever possible provide a reference to a more concrete version of material you use, such as a book or journal. When you do have to provide a WWW reference always provide the date on which you accessed the material as well as the date it appears to have been produced. The content of web pages can change and providing an access date offers the possibility of the material being retrieved from an archive after such a change has taken place.

## 1.5 The "Case of the Killer Robot" case study

This unit employs a case study as a vehicle through which to deliver and integrate a number of themes. "The Case of the Killer Robot" describes a fictional incident in which an operator is killed by an industrial robot. The articles which constitute the case study provide accounts of the development of the software which controlled the robot, the members of the development

team and the environments which pertained in the development and client companies. The complete text of "The Case of the Killer Robot" is available in book form (Epstein 1997) but the essential elements of it have also been made available by the author, Richard Epstein, on the World Wide Web (WWW). The author of this unit has reproduced the WWW material (Taylor 2002), with permission, at -

<http://www.macs.hw.ac.uk/~nkt/praxis/epstein/index.sht>

It is expected that this will be your primary source for "The Case of the Killer Robot" material. One of your assigned tasks in Topic 2 will be to read some of the articles in "The Case of the Killer Robot" in readiness for its formal introduction in Topic 3. It would be a good idea to make sure that you can access the material now.

## 1.6 End of topic test

**Q1:** The quote from Wilhelm Reich was taken from a book published in -

a) 1945

- b) 1954
- c) 1957
- d) 1975

**Q2:** Which of the following was NOT given as an example of the enhanced career opportunities which Higher Education can offer you -

- a) Control
- b) Creativity
- c) Money
- d) Power

**Q3:** Which of the following was suggested as missing from the OED definitions cited -

- a) Examinations
- b) Instruction
- c) Qualifications
- d) Research findings

**Q4:** Which of the following pairs was NOT mentioned by Ivan Illich as something that schools confuse -

- a) Education with grade advancement
- b) Learning with teaching
- c) Process with substance
- d) Understanding with knowledge

**Q5:** Which of the following was NOT suggested as a student characteristic -

- a) Critical assessment
- b) Initiative
- c) Intelligence
- d) Intelligibility

**Q6:** The inventory of items held in a library was called a -

- a) Catalogue
- b) List
- c) Menu
- d) Table

**Q7:** Which of the following were NOT suggested as reputable sources on the WWW -

- a) Libraries
- b) Newspapers
- c) Research institutes
- d) Universities

**Q8:** Web sites were described as being -

- a) Abstract
- b) Temporary
- c) Transient
- d) Transitive

**Q9:** When citing web sources which date should always be provided -

- a) Access date
- b) Amendment date
- c) Expiry date
- d) Last modified date

**Q10:** "The Case of the Killer Robot" was written by -

- a) Richard Epstein
- b) Nick Taylor
- c) John Wiley
- d) John Wiley's son

## 1.7 Assigned task

### Assigned task

Prepare written answers to the following two questions and take them with you to your first tutorial. Typed work is preferable but hand-written work is acceptable on this occasion.



Time  
taken? Time  
taken? min

1. What is the dictionary definition of *praxis*?

Make a written note of this.

2. What do you think *praxis* means in the context of your degree?

Write a paragraph on this.

## 1.8 References

Epstein, R.G., 1997, *The Case of the Killer Robot*. John Wiley & Son.

Illich, I., 1971, *Deschooling Society*. Pelican Books, 1976 edition.

Reich, W., 1945, *Listen Little Man!* Pelican Books, 1975 edition.

Taylor, N.K., 2002, *The Killer Robot* [online]. Heriot-Watt University (MACS), 16th December 2002 [cited 7th July 2003]. SHTML. Available from: <http://www.macs.hw.ac.uk/~nkt/praxis/epstein/index.sht>.

## **Answers to questions and activities**

### **1 Introduction**

#### **Answers from page 5.**

**Q1:** d) 1975

**Q2:** d) Power

**Q3:** d) Research findings

**Q4:** d) Understanding with knowledge

**Q5:** c) Intelligence

**Q6:** a) Catalogue

**Q7:** b) Newspapers

**Q8:** c) Transient

**Q9:** a) Access date

**Q10:** a) Richard Epstein