



# Durham E-Theses

---

## *The essence of a liberal education*

Whitehead, J. N.

### How to cite:

---

Whitehead, J. N. (1965) *The essence of a liberal education*, Durham theses, Durham University. Available at Durham E-Theses Online: <http://etheses.dur.ac.uk/9783/>

### Use policy

---

The full-text may be used and/or reproduced, and given to third parties in any format or medium, without prior permission or charge, for personal research or study, educational, or not-for-profit purposes provided that:

- a full bibliographic reference is made to the original source
- a [link](#) is made to the metadata record in Durham E-Theses
- the full-text is not changed in any way

The full-text must not be sold in any format or medium without the formal permission of the copyright holders.

Please consult the [full Durham E-Theses policy](#) for further details.

"The Essence of a Liberal Education"

By

J. N. Whitehead, Esq.

Date of Submission : 25th October, 1965.

## The Essence of a Liberal Education

Greek thinkers of the classical era, and Plato in particular, regarded education as a whole process - concerned with the body and the mind, designed to develop the faculties and qualities of man towards perfection. Such a process, to them, was a whole life process lasting throughout man's allotted time span and not something to be arbitrarily ended at 15 or 16. Education to them was a universal concept wide ranging though meaningful. Since the industrial revolution in England, however, the term "education" has, in ordinary language, tended to become more specialised, more atomised, limited by adjectival limitation. So in our everyday vocabulary we speak of 'technical' education, 'liberal' education, 'vocational' education and so on. The convenient shorthand is, no doubt, of use to the administrator when he is concerned with organisational principles involving objectives, policy, planning, duties, lines of authority and control. But this very atomisation has distorted the process of education and has given rise to fundamental conceptions which are often vague, often unsupported by sound theoretical criteria and which often appear in final syllabus form in a consequently harmful manner. Amongst the concepts which are misused the most, is the concept 'liberal', particularly in the field of technical education. No two persons using the term use it to mean the same thing. I propose in this thesis to attempt to define the term, to state what I think to be its essence and to speculate on its purposes with a view to justifying its use and the intellectual disciplines which come within its orbit. Then I shall examine representative 'liberal

studies' curricula from the field of further education, applying the criteria which I have established.

The term 'liberal' stems from the latin 'liber' meaning free and the idea of free (i.e. freedom) in all its dimensions <sup>will</sup> ~~have~~ a central place in the field of liberal education. Let us examine the idea of freedom in an educational context. Such a context involves two main elements (1) the teacher (2) the pupil or more accurately teachers and pupils. Let us take each group in turn - first the teachers. How can the idea of "freedom" apply to them? When we ask this question it is clear that "freedom" is not an absolute whether the teacher is one who teaches what are referred to as technical subjects or whether he is concerned with the arts - certainly so where examinations have to be passed before the student can proceed in his career. In a word the teacher is obviously not free to introduce a syllabus which he prefers to one that the examining body prefers. He is not free to give a disproportionate weight to one aspect of the curriculum at the expense of another. He is not 'free' either if he is incapable of looking down, as it were, on the subject matter of his discipline. He becomes free in this latter sense if he can visualise the manifold connections and associations of the ideas which compose his subject in all their alleys and by ways intrinsically between themselves and extrinsically with other disciplines and studies. Freedom from the teachers angle thus involves a lateral extension - a 'broadening' element for without this element he is unable to link the appropriate ideas of his subject to their wider context. The point is, perhaps more clearly seen - as is always the case - if we take two extreme examples. Let us suppose

there are two teachers - one trained say in social and political theory and the other asked to teach the subject without training. Suppose they had to take separate classes on the political philosophers beginning with Plato. The former would be in a position of looking down on the subject matter and would, say, be aware of the totalitarian aspects of Plato's thought and would be able to relate this by examples to totalitarian aspects in Rousseau, Hegel, Marx and other enemies of the "open Society". The latter would clearly not be in this position. So deep knowledge of the subject matter would make the first teacher in some way more free with a greater capability of lateral extension and put him in the better position to 'broaden' the perspectives of his students. My point is then <sup>that</sup> freedom in this context stems from knowledge of the subject matter. The idea of freedom has still other aspects when applied to the teacher. He must obviously be free to recommend different books to his students - thus exercising his own judgment and not have them imposed on him by some central authority. He must be free to recommend different books for the differing needs of his students - more advanced in the case of some who have progressed far, more intermediate books for others and perhaps further introductory reading for those having difficulty with the initial "break through". He must, and this is the great art, be able to identify the individuality and interests of his students which he can only do on the basis of close observation and reflection. If he is in a position to do this then he is in some real sense more free than some other teacher not in the same position. This identification is not so much a function of the knowledge of his subject matter but rather a function of his own educational

4

philosophy, thrown up by such questions as "What persons am I educating? What are their individual strengths and weaknesses in this subject?, Where does <sup>each</sup> ~~much~~ of their interests lie? Where are the gaps in the knowledge of each of them? How best can I aid the progress of each?", and so on. Here one expresses the hope that each potential entrant to the teaching profession should have at least a basic acquaintance with the work of the educational theorists and, consequently, a conception of the differing aims of education. Then his own targets will become clearer and the method he uses to achieve them will become more effective.

Dogmatism in the teacher is the very antithesis of 'liberal' and such a teacher who is not prepared to follow ideas wherever they lead, even though they lead into unpopular places cannot be called free. And his dogmatism will have a limiting effect on student development. Oh how inspirational it is in the midst of a lecture to hear a student say I disagree with you because of a, b and c and then to consider a, b and c and, sometimes, to remark I accept (a) and (b) but disagree with you over (c) because of (d) and (e) - what do you think (to the student) and then to the class? The discussion which follows opens minds - not least the teachers and is the technique for enabling students to follow ideas to wherever they lead and in the process of gaining flexibility of mind. Ideas accepted as the result of the pro and contra of discussion have been accepted because reason has led to that point and no other and not because they were imposed. A.N. Whitehead in his "Aims of Education" valuably distinguishes between 'inert' and 'active' ideas - active ideas - those applied in writing or discussion - those that are

5

used in their varying dimensions by the student and as it were become part of his personality. 'Active' ideas, it seems to me, make their impression on the minds of students quantitatively (as well as qualitatively) more when the teacher is 'free' from dogmatism and allows ideas to be discussed freely and without limitation by his students.

Whilst considering the "Essence of a Liberal Education" and considering the essential theme of freedom and its implications when applied to the teacher I am rather sadly reminded of a personal experience at my own college of a few years ago. A battery of 'liberal' studies inspectors (H.M.I's) were due to appear at the college to observe liberal studies as they were 'taught' to students reading for the old Diploma in Technology. I was 'selected' to be on show and submitted the topic "Marxism" - which after all has changed the world - some few days before. Instructions came from the Head of the Engineering Department and the Head of my own to lecture on something else. I naturally refused and made it clear that if I lectured at all - this would be the topic and no other because it followed naturally in a connected sequence of themes which I had been dealing with (and also because I thought I knew it rather well). I gave the lecture. My point is that for liberal education to flourish in any establishment then the ethos of that establishment must itself be 'liberal' and as the ethos stems in good part from those in the most senior positions, then great care should be taken in their selection - at least equal to the care in selecting teachers.

Let us now apply the idea of 'freedom' to the pupil. We have already agreed that this concept cannot be an absolute when applied in

an educational context. But we want nevertheless to apply the concept to the pupil - the man or woman involved in the educational process. The idea can, I suggest, be applied to them in two main ways. Firstly, we can say that our objective in a liberal education is to turn out free men and women and secondly we can say that choice is essential to freedom. Let us examine each of these in turn.

All would agree that to have a society consisting of free men and women would in some way be desirable. But conflict would arise when consideration was being given to the qualities which the 'free' person should possess and which the liberal education should seek to develop. What qualities are essential to the 'free' person? If we take, as I think we should, the Greek view of the person whom we are educating we begin with the fact of the existence in each of us of body and mind - the raw material of the educational process. In some way we have to 'free' the body and mind in the process of freeing the person. What are the most important qualities necessary to the free man? Roman educators such as Cicero spoke of 'gravitas' or dignity in their educational speculations and I do not think they were far wrong. Dignity - or self-respect - is one of the most essential personal qualities of the 'free' man. Without dignity or self respect a man is at the mercy of every emotion, every pressure, every opinion. His conduct would in a word lack foundation. <sup>x</sup> (see over)

<sup>x</sup> <sup>x</sup> Let me summarise the qualities of a man deserving the appellation 'free'. They are beginning to look rather formidable. Dignity, individuality, abstract sympathy, sensitivity to the truth (or love of knowledge) initiative, imagination, common fortitude and temperance.



X

Secondly, the freeman ought to have individuality. Contrast the person having individuality with a person in a crowd, or mob, acting as a crowd or mob. Thirdly, the freeman should possess the quality of 'abstract sympathy' the quality, that is, to feel as much about say several million war deaths as the one war death which occurred in his family. This quality will stimulate in him opposition to injustice on the large scale - opposition to war and the plight of underdeveloped territories. Another quality desirable to possess is what I would call a sensitivity to the truth or, as we would say nowadays, to the truth of a proposition or, as Plato said of the philosophers, <sup>of the</sup> <sup>of</sup> we must love knowledge.

The qualities of initiative and imagination are also desirable for the freeman. If he cannot take the appropriate action in a situation demanding initiative then he is not free to do so. Likewise if he cannot visualise the consequences of his actions he is lacking in imagination. The qualities so far mentioned are qualities most closely associated with the mind. Those most closely concerned with the body and worthy of development are the qualities of courage, fortitude and temperance.

X X for me summarised (see previous page)

I claim that the really free man or woman must possess each of these qualities at least in large measure and that it is the manifold purpose of liberal education to develop these qualities in each student.

How ? By what mechanism ? What should be the arrangement of subjects and what the priorities between them ? Is the curriculum which is suitable for men also the most suitable for women ? - what is role of the teacher of purely technical subjects ? is there a technique of teaching them which can be called liberal ? I propose to consider each of these questions in brief as they apply to the whole field of technical education. What subjects are best described as liberal in our sense of free and therefore 'broadening' ? Consider the two extremes - say philosophy and shorthand and typewriting. The latter are, it seems plain, purely techniques and the liberal - ~~or~~ broadening element is, at the most, miniscule. Philosophy, however, in dealing with such general ideas as god, truth, beauty, goodness, verifiability, meaning - has a high broadening content. It consists of the study of abstract ideas of that order - political theory too with its study of such ideas as equality, democracy, sovereignty, natural law, totalitarianism and so on is clearly in a similar category. Each general idea contains many particular instances - for example one cannot examine the idea 'equality' without considering the social, the economic and the political elements contained within the idea. The movement of the mind from the social, through the economic to the political aspect of the idea is itself a broadening experience and the subject must clearly rate in the first division of *liberal or* life as a 'broadening' (in one sense) subject. Other subjects which could be reasonably included in our first division ~~on~~ the basis of a large 'broadening' element - or the

purity of the abstract ideas involved - are mathematics for the idea of  $2 + 2 = 4$  is very abstract, and religion - or even more broadly - comparative religion. Let us take the study of history. What is the essential contribution of this study to man's perspective? Its contribution is plainly different from each of those subjects containing a purity of abstract ideas such as those in the philosophy group. History deals with facts, with the past. It adds a chronological time stream to the stream of consciousness of the student. To study what is known about the events of the centuries - to see how the world has become what it is contributes something different but something valuable. It is surely advisable for each student to develop a time scale for such a time scale contains the sequence of order. Other subjects too have their own contribution to make to the ultimate perspective of a liberal education. Take Economics for example. The purpose of this subject, according to Lord Keynes is not to turn out trained economists capable of advising the Government on economic policy. Rather its purpose is to teach students not to think in terms so much of abstract ideas as philosophy does, or in a chronological pattern as history does, but to educate them to think in the 'round', for the subject teaches students to look at the economy from the Governments point of view, from industry's point of view, from the trade union view point and yet again from the consumer view point. Themes are looked at from many angles. Let us stop for a moment and suppose a group were studying philosophy only. Then a perspective would develop in their minds which would be changed by the unique contribution of history and changed again by the study of economics. And so on. One could choose the unique contribution of

various subjects - the general element contained within the subject, ~~respecting~~ <sup>rejecting</sup> out of hand those subjects which are mainly concerned with techniques, such as shorthand, typewriting, accountancy and the practice of management. Nevertheless, from the series of possible subjects remaining, and having a general element, choice would be wide and time for liberal studies would be limited. What acceptable principles can we provide to make our aims capable of achievement? It is, or should be, a basic educational principle to relate subjects and methods of teaching to the age, ability and aptitudes of the pupils - for example it would be ridiculous to include economic theory in the primary school curriculum although reasonable at the 'further' educational levels. Secondly, the subject should have a considerable general content.

Thirdly the subject chosen must relate to the main studies of students. The series of 'liberal' subjects chosen to broaden the education of a scientist (with limited knowledge of the arts) would in some way be different from the series of subjects chosen to broaden the education of students versed in the arts, (with limited knowledge of the sciences) and different again from those with a mainly technological background). We need some 'model' to help us to make this distinction. It would be convenient to divide liberal education for practical purposes into (1) Main Subjects, (2) Ancillary Subjects, (3) 'Liberal' Subjects and (4) Liberal Activities. For example, main subjects would include the particular speciality, e.g. Physics, Engineering, Chemistry, Modern Language, Commerce and so on. Ancillary subjects would be studied because of the main subject and determined by it. Thus if the main subject was chemistry then 'German' would be a suitable ancillary subject and a student would be studying <sup>it</sup> to read chemistry more fully. We could

regard 1 & 2 combined as integrated studies. Liberal subjects - determined and limited by the degree of generality within them would be independent of 'integrated studies' and would be determined in fact by choice and interest but with a sight of the desirable qualities to be developed later. Liberal Activities would include student union activities and extra-mural societies - the accent being on the active as distinct from the passive participation of those involved. 3 & 4 together could be defined as contrasting subjects (unlike integrated 1 & 2).

Diagrammatically, the breakdown could be shown as follows :-

Liberal Education

1.	2	3.	4
<u>Main Subjects</u>	<u>Ancillary Subjects</u>	<u>Liberal Subjects</u>	<u>Liberal Activities</u>
Specialising e.g. Physics Chemistry Modern Language Engineering	Studying because studying <del>and</del> e.g. chemists studying German to read Chemistry more fully.	Independent of 1 & 2 and studied because of intensive interest. Choice important here.	Students Union - Extra Mural Activity.

Thus we have a model to help us to consider liberal education rationally and, indeed, to assist us in examining the curricula of the various categories of institutions in Further Education. I propose now to outline current 'liberal' studies curricula at present in use in C.A.T's, Regional College, Colleges of Art and Area Colleges in the field of further education.

1. Birmingham College of Advanced Technology

The college prospectus sets out the object of the liberal studies programme as follows:- "The object of a general studies programme is not

to compete with the students technological studies but to supplement and enrich them. It is not aimed at producing professional artists, sociologists or biologists. It merely sets out to introduce the student to some fields of knowledge which he might not otherwise enter, to stimulate interest in them and in this way develop a rational yet critical and questioning attitude to the social, ethical and aesthetic problems which he will inevitably encounter. The belief which underlies the idea of General studies is that the student will, in consequence, become a more responsible, more sensitive and better informed citizen and, being so, will be more effective and competent as a professional man".

#### Outline of College Courses of Study

Students in college undertake three kinds of studies :-

- (a) Their main scientific or technological studies.
- (b) General Studies.
- (c) Professional Studies.

Technological and Scientific Studies lead to a professional qualification, are the essential basis of vocation and take up the bulk of students time, e.g. courses leading to the Diploma in Technology.

General Studies - are general in two ways

- i. They are not aimed at any specialist qualification.
- ii. They are taken by all students regardless of their particular interest or vocation.

Professional Studies - are those which contribute directly to a student's professional competence, are related directly to his profession but are not strictly speaking scientific or technological e.g. industrial administration, report writing, foreign languages.

In the first year a student takes 3 hrs General Studies	
In the second " " " " 3 " " "	
In the third " " " " 2 " " "	) and 1 hr. ) Profession- ) al studies
In the fourth " " " " 2 " " "	

Outline of General Studies Programme

In the programme over the four years will cover three broad areas of study.

- A. The relation between science and technology and social life.
- B. The social problems of an industrial civilisation.
- C. Aesthetic and humanistic studies.

Each for these is broken down into three subjects as follows :-

- A. 1. The Technologist in Society.
- 2. Biology and Society - Health and conquest of Disease.
- 3. Philosophy of Science.
- B. 1. Law and Liberty.
- 2. Sociology and Social Philosophy.
- 3. General and Social Psychology.
- C. 1. Comparative Ethical Systems.
- 2. Literature.
- 3. The Fine Arts and Architecture.

During the first two terms of the year the students attend on alternative weeks a series of 9 lectures listed below, to be followed by questions and discussion. In the intervening weeks the afternoon will be divided between tutorials and a period of study for reading, and other prescribed assignments.

### First Year

1. The Technologist in Society.
2. Biology and Society.
3. Philosophy of Science.
4. Law and Liberty.
5. Sociology and Social Philosophy.
6. General and Social Psychology.
7. Comparative Ethical Systems.
8. Literature.
9. The Fine Arts and Architecture.

### 2nd and 3rd Years

Students follow their chosen courses of study and under tutorial guidance are expected to write essays of a high standard. Some of the time will be allocated to students' reading and fact finding for the essays. Essays are assessed and the student has to take an oral examination. During the two years the students will receive special guidance on the use of the English language.

### Fourth Year

Students meet in groups of thirty for a series of lectures in which contemporary problems of the individual in society are discussed. During the second hour of a two hour period groups break up into syndicates to discuss and prepare reports on the problem.

The dual aim of the 'general' studies syllabus is basically then to make the student a better citizen "more responsible, more sensitive and better informed" and consequently a more competent and effectual professional man. Is the syllabus likely to do so? And is the aim



14

acceptable and the methods designed to achieve the aim the most suitable? No one could quarrel with the aim of making the student a better citizen and a more effective professional man. Is the curriculum likely to develop the qualities of dignity, individuality, abstract sympathy, sensitivity to the truth, initiative, imagination, courage and temperance the desirable end results of a liberal education listed earlier? And, secondly, can the plan be related to the Main, Ancillary, Liberal and Liberal Activity model previously outlined as the organisational framework of practice?

Is dignity - or self respect likely to be developed? This can only be developed by excellence of work by the student. Anything slipshod or careless or inaccurate will assuredly operate against the development of this quality. Accuracy - the morality of the intellect - is necessary to the development of dignity as is excellence in carrying out some piece of work. During the first year the students are attending lectures centering around man in society and have the opportunity of actively participating in questions and discussion and in the intervening weeks they attend tutorials, have guided reading and (presumably) do some written work. Dignity - or self respect will be enhanced in each individual by improvement in the quality of his active participation in discussion, written work and reading the best that has been thought and written about the theme in question. True dignity could be enhanced by actively participating in an entirely different series of lectures but nevertheless the syllabus does not operate against this. Individuality - what aspects of the curriculum are designed to develop individuality in the student? Not the lectures certainly because the lecture content

cannot by its nature be adapted to the peculiar needs of every particular student. But the tutorial can. The academic needs of a particular student are capable of being dealt with and the differing levels of particular students can be dealt with accordingly. The differing assumptions of differing students can be challenged - they can be asked to justify their conclusions - in a word they can be taught to answer the question why and develop their thinking capacities and thus their individuality for how a person thinks governs the nature of his individuality. The 'Yes' man who always accords with authoritative hierarchies has but little individuality - the person who learns to put constructive reason against inferior ideas - the person who has individuality and thinks has a great part to play in the society of the future. Individuality is furthered too in the second and third year of the course when students are enabled to select subjects of their choice from the nine main subjects of the first year. After the widening of the mental horizons which should have taken place in the first year along a broad front they are in a position to explore in greater depth the subject of their choice. Depth fuses with breadth and from depth comes style - the 'style' of Whitehead in his "Aims". What we know in depth, what we know well develop style in that field and style comes with application and practice. Style is everywhere recognisable and one recognises it in ~~diverse~~ <sup>diverse</sup> fields. One recognised it with Sir Leonard Hutton in his many duels with Keith Miller the Australian cricketer. Hutton's style developed as a result of continuous practice in the years of his youth so that judgment became intuitive and reached the stage of art when an outswinger projected at 90 miles an hour was cover-driven to the <sup>parilla</sup> ~~position~~ rails. One recognises

it in the administrator, in his decisions, organisation, in the very desk itself. Practice has developed style and style has become an art.

What in the curriculum is designed to develop abstract sympathy? ~~The~~ sympathy which leads to a constructive response against cancer deaths rather than a cancer death or against millions of war deaths rather than a war death in the family against under privilege in general rather than against under-privilege in one's next door neighbour. There does not seem to be much that does so directly. Indirectly, the study of the Philosophy of Science and comparative ethical systems should develop familiarity with abstract ideas and formulate the basis of 'general' thinking. Perhaps the inclusion of "An outline of World History" syllabus something along the lines of Geoffrey Barraclough's brilliant new book "An Introduction to Contemporary History" would help. The nation state has broken down and developments in communications are stressing <sup>the</sup> 'one world' approach rather than the isolated 'Nation State' approach to History. Lecturers ~~that~~ looked at problems through the eyes and history of under-developed nations as well as from the angle of developed nations - for example a lecture on the Cuban fiasco from the standpoint of Cuban History would be instructive and revealing when set alongside one from the Western standpoint. And again the time stream has been forgotten with the exclusion of history from the general studies syllabus.

Sensitivity to the truth is love of knowledge. This will depend on the interest created by the teacher and the level of participation by the student in the learning process. Each of the subjects

are justified in this context - but written work and tutorials with their question and answer discussion are the basic tools necessary for this to develop. Wide reading is another *essential* and one assumes that considerable weight will be placed on this *aspect* ~~subject~~ by the College of Advanced Technology at Birmingham.

Initiative. Initiative in the student is measured by the conduct of the student. The liberal studies syllabus gives choice to the student and therefore widens his freedom. It provides for individual work by the student and ~~the~~ the collection of facts for particular essays. Opportunities for initiative could be developed further by an additional requirement. Students could be given the choice of a wide series of topics at the beginning of the course - and their own choice could be taken into account later and they could be requested to carry out a piece of work in depth - say an essay of 5/6000 words on a particular topic that interests them and with reading references provided. The task of collecting information, organising it and giving it pattern and unity and bringing it to a successful conclusion would develop initiative and creativity in the student and provide experience in the selection of words and phrases, the selection of which would develop accuracy of expression. When considering the curriculum from the standpoint of developing initiative I observe that there is no ~~relation~~ *mention* of student societies and extra mural organisations. No doubt provision is made elsewhere in the college literature but the active participation in a student's society and perhaps the chairmanship ~~of~~ it provides valuable experience for the student and enables him to contribute according to his capabilities - the essential pre-requisite to initiative development. How far does the syllabus encourage development of imagination? Whilst it is ~~true~~ that the teacher by his approach to the

subject can encourage this development and the reading of appropriate literature will help, what of the curriculum itself? What is in it that directly appeals to the aesthetic sense - that sense which is attracted to beauty, to harmony and style, the sense which enriches imagination? The two subjects which have the most relevance are Literature and the Fine Arts and Architecture. The syllabus in Literature is designed "to give an awareness of the aesthetic potentialities of language by study of various types of writing". It is divided into two parts - Part 1 is concerned with Analysis i.e. with (1) Analysis of Everyday language (daily newspapers, common conversation - comparison of styles, tones, intentions) (2) Analysis of Artists' uses of language from the everyday (e.g. Advertisements) up to contemporary poetry (3) Analysis of themes in everyday use on T.V. Radio, in films, plays and magazines.

Part 2 requires the discussion and analysis of literary <sup>genre</sup> ~~genius~~, poetry, drama, the novel and each student is required to intensively study one modern example of each of the ~~genius~~. <sup>genres</sup>.

I am not impressed by the disconnectedness of the themes contained in part one - they lack comprehensiveness and their 'influential' content is small. I am with Arnold in his "Culture and Anarchy" <sup>when</sup> he requires the cultured man to be well acquainted with the best that has been thought and <sup>said</sup> ~~given~~ in the world. From the whole range of the world's literature there are several great literary artists to choose from, whose books are worthy of "being chewed and digested" and thus becoming part of one's being. It is not for me to <sup>set</sup> ~~let~~ down a syllabus of literature - ~~that~~ is for the literary specialist, but I

reserve the right to comment when the important question of imagination is at stake. For example, shortly before lifting my pen to write this thesis I had <sup>just</sup> finished reading Duclous "Les Liasons Dangereuses". It was a work of profound psychological insight and imagination, indicating the triumph of the personal relationship over social convention. The reading of such a work, rather than an examination of ephemeral newspaper articles, enriches the imagination more. The great works of world literature are by definition limited. Shakespeare, Stendhal, Proust, Duclous, Flaubert, Dickens and so on. Any short list of them would be a personal list but any short list drawn up on the principle of 'greatness' of literature would, I'm convinced, have a far greater impact on the minds of Birmingham's students than a study of the trivia of "daily newspapers and common conversations". 'Styles, tones and intentions' could be compared from the great literatures of the world with a greater enrichment of the student's imagination than would be the case with the existing syllabus. Poetry has its place in Part 2 of the literature syllabus and with this I am in total accord. Poetry, the produce of the muse, will attract the student to beauty of language of words and ideas, will lift the imagination to the heights and enhance sensitivity. Many poets should be ~~lasted~~ and some depth be given by encouraging students to go into greater depth with one or two poets - whether ancient or modern no matter - the poets chosen to be the students own selection. I would make a plea for the compulsory inclusion of <sup>Rhetoric</sup> ~~Literature~~ in all further education syllabus, whether at C.A.T., Regional, Art or Further Education levels. <sup>My own</sup> ~~Any such~~ observations have lead me to the conclusion that most students (except, <sup>obviously</sup> ~~obviously~~, those with a public school background) find great

difficulty in verbal expression - say in proposing a vote of thanks or speaking in a debate. <sup>Rhetoric</sup> ~~Rhetoric~~ - a study of method and the actual practice of it which is so neglected nowadays, would, I believe, assist in the creative development of the individual and would develop personal confidence.

Success in this will again only come with practice and Liberal Education could be a means for providing this.

Regional College Syllabus: Huddersfield College of Technology

The Liberal studies <sup>four</sup> syllabus of this college is designed for Diploma Level students and has stated aims :

- (1) To develop from a minimum basis of factual knowledge a study and definition of the assumptions, influences and ideas making the environment of the modern student in further education.
- (2) To give the student power to relate his own discipline to his social environment.
- (3) To develop powers of accurate, consistent and extended thought and the power of seeing significant relationships.
- (4) To develop a command of the use of English in speech and writing.

The details of the syllabus are shown below.

### First Year

1. The crowded Island : Persons : Society : Bread and Values.
2. Britain's Economy : 1945 to date.
3. Economic and Social Problems of Industrial Location.
4. Britain's Transport Problem.
5. Problems of Social and Economic Planning.
6. Prevention, Production and the Computer.
7. The Town and the Factory : Design for Living 1.

8. The Town and the Home : Design for Living 2.
9. Technology as a social force.
10. Dickens and Shaw on 19th Century Britain.
11. Towards the Welfare State.
12. The Affluent Society.
13. The Literature of Protest 1.
14. The Literature of Protest 2.
15. Government and Politics 1.
16. Government and Politics 2.
17. The Rule of Law.
18. Ministers and Monarch.
19. Shaw "The Apple Cart" - a comment.
20. State and Church.
21. Technology as a culture.
22. The Politics of Economics.
23. Practical Politics in the location of industry, Industrial Planning.
24. Incomes and Prices.
25. Foreign Trade - The British problem.

### Second Year

1. Origins of attitudes - The Western Way - The Russian Way.
2. Greek tribe into Greek city.
3. Greek citizen and the barbarian - the Greek Voice in the Theatre.
4. Philosophers and Statesmen.
5. Technology in the Ancient World.
6. Greek Scientific Observation.
7. God and the Moral Order - The Hebraic tradition.



8. The Book of Job.
9. The Pax Romana : Economics.
10. The Pax Romana : Technology.
11. The Pax Romana : Law and Government.
12. The fall of Rome.
13. The Medieval chain of being.
14. The chain as seen in Art.
15. The chain as seen in Literature.
16. The concept of Christendom.
17. Roger Bacon : Power, Magic and Science.
18. Erasmus and <sup>Hu</sup>~~Humanism~~
19. Geographic exploration and developing Technology.
20. Da Vinci.
21. Florence and Rome in the Renaissance - some buildings and paintings.
22. The Reformation and the Counter Reformation.
23. Protestantism, Capitalism and the Old Order.
24. The changes as reflected in Shakespeare and Johnson.
25. <sup>Copernicus</sup>~~Copernicus~~, Brahe and Kepler.

### Third Year

1. Bacon : his ideal, his method.
2. Gallileo and Descartes.
3. Donne and "The New Philosophy"
4. 'Lear' and Nature'
5. The Augustan Age under Louis XIV.
6. Newton's achievement : the power to generalise and predict.
7. God the Mechanic : Hobb~~e~~s and Materialism.
8. Pope and Dryden.

9. The Moral Order<sup>1/2</sup>
10. The Age of Enlightenment.
11. Concept and Experiment : 18th Century Chemists.
12. Observation and Classification - Geology and Biology.
13. The liberation of emotion : Evangelicism, Wordsworth, Keats.
14. New concepts of the Human Mind : Goethe, Hegel.
15. Tom Paine : The social, economic and political effects of the French Revolution.
16. The Northern Inventors.
17. The Marriage of Science and Technology.
18. Darwin and Social and Political Thought.
19. Utilitarians, Marx and Scientific Socialism.
20. Arnold's Commentary.
21. The Pre-Raphaelites and William Morris.
22. Nationalism, Political Power and Technological invention - a relationship.
23. Lawrence and the flight to the unconscious.
24. Relativity and a Metaphysic.
25. Whitehead and Christopher Dawson - a comment.
26. Hopkins and Eliot.
27. The Two Cultures 1.
28. The Two Cultures 2.

Lectures during each of the three years are of an hours duration. During the first and second years a second hour is spent under the guidance of the class tutor discussing the previous lecture and, in addition, each student is required to prepare notes for the inspection of his tutor. Two essays per term are also required from each student. In the third year of the course discussion is open under the direction

of a student chairman. All senior students for a given year are present at each lecture - and during the last year are all present for discussion. A full bibliography is issued to all students as the course proceeds. An interesting and valuable development is the requirement that all Chemistry and Engineering students are required to have experience in a residential establishment i.e. at Grantley Hall for a Residential Course lasting not less than 5 days.

It is plain that the first year of the course provides a survey of the social economic and political situation in which the student is living. The second and third years are concerned with an enquiry into the growth of ideas in Western Europe which have led to the present day. The three years under review, during which students are maturing, are seen as a preparation for the Management Studies of the fourth year. Certainly, problems of communication, of human situations in industry and isolated studies in environment history and economics would tend to be ineffective in the early years of the course partly as a result of the immaturity of the students to profit by them through a too limited range of experience. The three year course in 'liberal' studies will tend to give both direction and purpose to the Management studies of the fourth year which would otherwise be lacking.

In evaluating the above curriculum in the light of the stated aims, it is clear that provision is made for active participation by the student. Immediately after the hours lecture discussion continues and each student prepares written notes of the lecture. The preparation of such notes clearly gives the student experience in observing the salient points of a lecture around which each lecture is constructed.

It is an active process and aids recall. What we have written we tend to remember more clearly. Such a notetaking procedure is not, however, a creative experience for the student in itself but this is offset by the requirement that each student is required to write two essays a year. This is a creative experience for, on the basis of a select bibliography, on the basis of a lecture and following discussion, each student in essay writing is required by the nature of the task to plan his material and to give pattern and unity to it in the process. In searching for the appropriate words and ideas, the development of his theme and the organisation of his material, the student is engaging in the creative process of thought. When we use words in writing we tend to use them more accurately and precisely than we do in speech. Practice in the art of writing leads to development in the creative and accurate use of English and every later piece of writing becomes that much easier. Pope expressed the essence of the idea when he wrote :

"True ease in writing comes from <sup>art</sup> ~~out~~ not chance/as those move easiest who have learnt to dance".

Practice makes the writer in the same way that practice makes the dancer or the cricketer. Practice is the prerequisite of any art. Whether two essays a year is sufficient is debateable and depends considerably upon the time required for other subjects. Even so, this creative opportunity is recognised in principle by the Huddersfield College Authorities and is not denied the student. Once again encouragement is given to reading, writing and discussion - the centre of student activity-and they are consequently in a position to develop their range of ideas (by reading) to clear their minds (by writing) and to develop

20

flexibility of ideas (by discussion). The institution of a short residential course will provide social experience which many technical college students lack and is a welcome <sup>^</sup>innovation which desirably ought to be developed throughout the entire field of technical education as soon as resources permit.

Certain similarities are observable when comparing the Huddersfield 'liberal' curriculum with that of Birmingham. In each case no specialist qualification is aimed at and again the curriculum is taken by all Diploma students regardless of their particular interest and vocation. The relationship between science and technology and social environment is highlighted in each instance. Time, in each case, is scheduled for the consideration of some of the social problems of an industrial civilisation and Aesthetic and Literary and Ethical themes are considered in both. Huddersfield place greater emphasis on the lecture - 25 hours each in the first and second year of the course and 28 in the third year compared with 9 in the case of Birmingham. The device of alternate week lectures at Birmingham allows for entire afternoons to be available on alternate weeks for private study <sup>including</sup> reading and writing experience to be developed by students whilst time is allocated immediately after lectures for questions and discussion. Whereas at Huddersfield attendance at seventy eight lectures is compulsory over the three years and there is no student choice, at Birmingham the second and third years are governed by student choice - the student is permitted to select his main course of liberal studies and to work under tutorial guidance after being introduced in the first year to a fairly wide field of liberal themes ranging from (1) The Technologist in Society to (9) The Fine Arts and Architecture. There is greater breadth in the

27

Huddersfield curriculum - (though less choice) and greater depth in the second and third years of Birmingham's curricula. At Birmingham in the second and third years, as a result of the freedom of student choice, a student is enabled to follow in depth that area of a 'liberal' education which is of peculiar interest to him. He is studying that area because he wants to do so and has interest in it. Now, A.N. Whitehead in his "Aims of Education" stresses that specialisation (study in depth) develops style - "the last acquirement of the educated mind" - "the ultimate morality of the mind". I accept the truth of Whitehead's argument. Study in depth, in some field of personal interest, is an attractive requirement in any liberal studies curricula - no matter how broad the entire curriculum may be. One can imagine a horse with 'blinkers' on. The light of day is shut out from the sides of its eyes - it can see straight ahead without distraction along clear lines. Within its narrow lines of sight everything is more vivid and distinct than would otherwise be the case. So with the specialist - he who has studied in depth some defined area of knowledge - he can see more vividly and clearly the contents of that area. He becomes master of that area as the consultant becomes master of his area of medicine as the physicist becomes master of his area of physics. He has developed a sense of style (in Whitehead's sense) by specialisation. True he may not see the ramifications and connections of his distinct ideas with other areas of knowledge but as in the case of the Birmingham and Huddersfield curricula the breadth of the liberal studies should broaden the mind and in so doing open up new vistas and connections for the vivid and distinct ideas which he will have acquired from his specialist study of some area of interest.

West of England College of Art, Bristol (Diploma Course)

The West of England College of Art "Liberal Studies" syllabus emphasis four main aims which the syllabus is designed to achieve.

These are :-

- (1) To broaden a student's awareness of the objective and subjective aspects of the world.
- (2) To encourage him to develop an open and enquiring mind.
- (3) To stimulate him to think logically and critically, and to speak and write clearly.
- (4) To help him to form a sense of values.

The college memorandum on Liberal Studies emphasises that throughout the programme of studies, three factors will continually be borne in mind. These are

- (1) The students own interest.
- (2) The activities going on in all areas of the college.
- (3) The world at large, in its various aspects, past, present and future (sic')

In order to achieve the above aims the memorandum lists the methods to be adopted. The underlying principle is stated to be that students should be as actively engaged as possible. That three techniques of study will be developed i.e. lectures, seminars and tutorials.

Lectures on science and humanities are given by members of the Liberal studies staff, and visiting lectures contribute, on invitation, from their own speciality. Seminars are planned to be held with small groups of students and the seminar principle provides for discussion, debates, talks given by students, films, filmstrips, gramophone and tape recordings,

visits, poetry and play readings, musical appreciation and other activities. The Tutorial principle provides for the students to receive personal tuition in their liberal studies sphere.

The Diploma course covers three year's tuition. The pattern of 'liberal studies' is as follows :-

First Year : This is concerned with two themes Experience and Communication.

Second Year : This is concerned with the Individual in Society.

Third Year : This is concerned with Studies in Philosophy and Religion.

During the first year, when Experience and Communications are the themes - each of the first two terms is divided into two five-weekly periods for the study, in turn, of each theme. Lectures provide a background and a framework for ideas. Each student is required to carry out a definite project in each of the five week periods, involving reading, direct personal investigation and discussion. Students have the choice of presenting the project either in essay form or in the form of an illustrated talk. In the last term of each year the entire emphasis is concerned with the study of poetry, drama and music.

The second year of study is designed to acquaint the student with the relationship between the individual and society. The themes to be studied are similar to those of Birmingham and Huddersfield and range from Democracy and the system of government in the political field, to wage bargaining and the determination of the price level in the economic field to studies of the class structure in the social field.

The third year is designed to interest the student in abstract ideas of a broad nature and to provide an appreciation for the precise



formulation of general ideas and of their relationships. The understanding of general ideas makes possible a fuller comprehension of life and its activities. As Whitehead says "A mind so disciplined should be both more abstract and more concrete." It has been trained in the comprehension of abstract thought and in the analysis of facts.

Any commentary on the West of England College of Art must take cognizance of the fact that Art and Design are the main studies in terms of my earlier analytical model and these studies themselves develop the aesthetic sense of the students concerned, whereas Art and Design to a Diploma student in say Engineering would range highly in a hierarchy of Liberal subjects in part because of their contrasting nature with Engineering - they themselves would require 'contrasting' for the Art Diploma Student in an ideal 'liberal' curriculum. None of the main themes of the course at this college are sufficiently contrasting to the main studies whether Experience and Communication, the Individual in Society or Philosophy and Religion to provide a sufficiently 'broadened' base. Such themes would undoubtedly range highly in the Liberal education of any Diploma Engineering group. One way out of the dilemma from the standpoint of the College of Art would be to provide a range of optional subjects which could be selected according to the student's interest and having a scientific or technological basis. The cultured man of the contemporary era has a mind cultivated in the arts and sciences and technologies. We have seen earlier the application of the arts and sciences to the liberal education of 'technical' students. Let us provide also the opportunity of learning in the sciences and technologies to the Art Diploma students. Let such students have the opportunity of

acquiring the rudiments of some aspect of science and some one technology in accordance with their interests and this will, I'm convinced, widen their perspectives more than the existing syllabus. Plato in his "Republic" warned against the excessive attention to the philosophic element within the soul and visualised its dangers. In the absence of the possibility of some scientific and technological study - as well as the absence of any physical education - the West of England College of Art syllabus can be faulted. Nevertheless I welcome the emphasis placed on student participation in seminar, writing, discussion and tutorial. I welcome the carrying out by each student of a project within each five week period - such a project gives each student the opportunity of going into 'depth' in some particular field of interest and from 'depth' style develops as we saw earlier. I am attracted too by the scheme of the liberal studies curriculum, that is to say by taking Experience and providing opportunities for improving communication in speech and writing on the basis of individual experience, by relating the individual to society and the State which, if done well, will enable him to acquire a more vivid idea of his rights, duties and obligations. The third year's study of Philosophy and Religion certainly introduces the student to abstract ideas and such subjects as I pointed out earlier in the essay must because of their content - abstract ideas - with lateral extension tend to develop the comprehensive view toward the "Weltanschauung". As a matter of organisation, Poetry, Music and Drama at present studied in the third term of each year, could be limited to the third term of the first year and the study of science and technology, the theme in each instance decided by student interest - could be studied in the final term of the second and third years.

An Area College : Constantine College of Technology, Middlesbrough

The Liberal Studies plan for Diploma Students at Constantine College of Technology, Middlesbrough provides for three hours a week to be spent on this field, two hours for compulsory subjects and one optional hour for courses to be selected by the students from a list of optional subjects determined by staff interest and which will vary with changes of staff. The compulsory courses are as follows :-

First Year      Communication - Great Engineering Achievements.

Second Year     Government and Society and International Affairs.

Third Year      The Citizen and The Law - The British Economy.

Fourth Year     Experimental Psychology in Groups - Industrial Relations.

In respect of the Business Studies Diploma (as distinct from the technical diploma) compulsory courses in Science, Metallurgy, Engineering and International Affairs are available.

During the first year of the course 'Communications' is designed "to develop precise thought, its clear expression, confident use of the written and spoken language and the encouragement of objective and critical attitudes generally". Accent is placed on student participation in the form of written exercises and tutorial discussion, seminars, individual and group projects and instruction and practice in all kinds of non-conversational situations, as for example, addressing large and small audiences, committee speaking, procedure and chairmanship. The subject "Communications" is divided into three parts (1) written communication (2) spoken communication and (3) logic. In (1) above Gowers, Fowler, Partridge, Quilter-Couch and Quirk are critically evaluated and studied. Afterwards the knowledge and experience acquired is applied in the

55

writing of technical and non technical reports, letters and memoranda, with particular reference to the conveying of technical information to a non-technical reader. In (2) above some weight is given to Rhetoric in the sense that students obtain experience in addressing large and small audiences and in participating in committees. No time is allocated to the study of the construction and delivery of great speeches of the past and present along <sup>Cicer</sup>~~Ciceronian~~ lines and I have no doubt that further benefits would accrue if this technique were practiced. Certainly order and unity and construction of speeches would benefit. The laws of thought are dealt with in the third section of "Communications", i.e. in the study of logic.

"Great Engineering Achievements" is also compulsorily studied by all diploma students during the first year of their course. In this section there are five main themes (1) Single schemes for Hydro-Electric Power and for Irrigation e.g. The Kariba Dam (East Africa), The Boulder Dam (The U.S.A.), The Dneiper Dam U.S.S.R. (2) Comprehensive Regional Schemes e.g. The Tennessee Valley (U.S.A.), The Damodar Valley (India), The Nile Valley (Egypt and the Sudan), The Snowy River Scheme (Australia), (3) Land Reclamation Schemes e.g. The Netherlands and the Fens of East Anglia (4) Canals e.g. The Suez, The Panama, The St. Lawrence Seaway, The Manchester Ship Canal and (5) Engineering Achievements in Other Fields e.g. The Economic and Social Effects of Automation, Nuclear Power, Modern Transport and the Conquest of Space.

In terms of my earlier model of Liberal Studies "Great Engineering Achievements" is clearly an ancillary study and is studied specifically by engineering students to widen their 'engineering' horizons. This

follows because a world-wide selection of major engineering achievements has been made and because the physical, engineering, financial, political and social problems involved are studied. Certainly even a greater impact on the consciousness of the student could be made if it were possible for them to visit the sites of these engineering achievements. But this is impossible, of course, and the themes involved and their treatment should, and does, provide an important part of the Liberal education of an Engineering Diploma student.

During the second year of the course "Government and Society" together with International Affairs are studied. The contents of the former are similar to Huddersfield and Birmingham's approach and is designed to familiarise the student with the organisation of his society and his place as an individual. "International Affairs" is designed to provide the student with a background of international affairs and to develop his interest in international events. The mental horizons of the student are shifted to the international plane and away from the parish. It should be possible for each student when considering questions of war and peace from 1914 and when considering the theme of Affluence and Poverty and Population to develop what I previously called the quality of 'abstract sympathy' in the process. If this quality is developed then it should be possible for the voice of the student to contribute something to informed opinion on these questions and the growth of informed opinion in our nation might ultimately influence important political decisions in a desirable direction.

In the third year of the course the two main themes are "The Citizen and the Law" and the "British Economy". Again, the purpose of

32

these subjects are to familiarise Engineering Diploma students with the legal, social and economic background of the society in which he lives and to give him an understanding of some of the economic problems which govern his livelihood and his obligations as a citizen to the nation's laws.

For the fourth and final years the two compulsory subjects are Experimental Psychology and Industrial Relations. The purpose of the former is to help the student; better to understand themselves, their colleagues and associates and the nature, purposes and functioning of the groups and larger organisations to which they belong. The purpose of Industrial Relations is to create an awareness in the student of the industrial history of modern Britain and of the contemporary problems of industrial relations. It is designed to give them an opportunity of studying the main problems of industrial relations rationally so that when they join their firms they will, on a rational basis - which entails the consideration of the relevant pros and cons of a situation - consider and influence the working of their organisation in an informed manner, and not less - the climate of opinion within their firm.

The above eight subjects are compulsory and are attended by all students on Diploma Course. There is, however, a series of optional subjects which students can choose to attend or not. These optional subjects are given by various lectures within the college and stem from their special interest. Examples of optional subjects on the present programme of Liberal Studies are The Modern Cinema, Modern History of Middlesbrough, Taxation, Social Psychology, The Liberty of the Subject, Archeology, Political Theory, An introduction to Modern Logic, Literary

Appreciation, Theory of Music, Comparative Religion and with the assistance of the Art College, Appreciation of Painting and Sculpture. All studies require active student participation in reading, writing and discussion and significantly it has been decided to hold no formal examination in Liberal studies although all students are assessed on the basis of work done and on individual participation within the group.

At the present stage of development of technical education a case, no doubt, can be made out, for students to attend compulsorily 'Liberal Studies' lectures. In the absence of compulsion the risk would be that there would be no attendance. The prime requirement is for the lecture to interest the student in his material so that later attendances become more voluntary. It is the voluntary base which is ideal because then the students attend because they want to attend and freedom - our essential ingredient - flourishes and the liberalising process has a richer soil for growth. The claims of the more abstract subjects which we earlier placed in the first division of liberal subjects have been ignored amongst the compulsory eight subjects and one looks in vain for Philosophy, Comparative Religion, Political Theory and Mathematics and one looks in vain for an outline of the History of Science and Technology. True, provision is made amongst the optional subjects for Political Theory and Comparative Religion but in practice only a small portion of available students attend these and the remainder have little opportunity of becoming versed with the powers of abstract ideas.

In the earlier part of my thesis I agreed that liberal education was concerned with the whole man - body and soul - and I emphasised that physical education seemed necessary to develop certain desirable character

qualities such as courage and fortitude. But in no case, whether C.A.T, Regional College, Art College or Area College is any provision made for physical education and the liberal studies curricula in question do very little to further the qualities of courage, fortitude and temperance. The right kind of physical education could, I'm convinced, develop these qualities. I visualise, for example, that instead of setting man against man as we certainly do in such sport as football, cricket and boxing, if we organised rather man against nature that the desired qualities of character would more easily develop as would changed attitudes of mind. For example, if we take a river crossing of reasonable difficulty, or some mountain crag of equivalent difficulty - as in fact Gordonstoun School does on the basis of Hahn's educational philosophy - then students would have to co-operate as a team in order to attain their aim of conquering nature. Each would in part be dependent on the others for success and each would contribute to the success of others. A valuable spirit of partnership could develop that might have lasting value for life in our society. As it is, say when football is the medium of physical activity, when the Outside Right has the ball at his toes, he is intent on beating his opposing number at all costs and scoring the all important goal. And when he does, man has beaten man in his strife and becomes that much more competitive in his outlook and attitude. But when we climb our mountain crag we are dependent on the assistance of others and we have not successfully defeated our opponent as the boxer or footballer does but we have entered into partnership with others for the purpose of achievement against nature, having exercised our judgment and having developed our skills in the



process. A curriculum of physical education designed on the principle of partnership rather than on individual competition would have a high priority in my scheme of liberal education.

I have briefly examined the "Essence of a Liberal Education" first in terms of the desirable qualities which it should aim at producing in the student - the freeman of our theme. I have considered the nature of subjects themselves and have highlighted the general (broadening) factor in some, (e.g. philosophy) and the lack of it in others at the opposite extreme (e.g. shorthand). I have indicated how the types of ideas involved in the subject matter can be classified from the standpoint of liberal education and at the margin be used to choose between subjects for inclusion in a liberal curriculum. I then examined representative curricula in particular types of further educational establishments with a view to seeing whether they could turn <sup>out</sup> the 'freeman' with those qualities which I think such a man ought to possess. I have shown that there can be no one ideal curriculum for all types of students and that their "main" study will to some extent govern the choice of what are the most suitable subjects - called contrasting - that should desirably be included as in my analytical model. In fine, I have stressed in essence, that the liberal education of an engineer should consist of different contrasting subjects to those involved in the liberal education of the artist or scientist. Throughout this analysis it has been stressed that the part to be played by the teacher is important. The teacher of technical subjects - containing a high degree of 'skill' or 'technique' content and (usually) a limited element of 'general' content must nevertheless if he is to contribute to the liberalising of his

students, teach them to think (to answer the question why?) and approach his material accordingly. He must open up new connecting wires in the minds of his students that link other areas of knowledge to his own.

An education which neglects the physical development of students is less than liberal and an education which denies residential experience limits social development. The Greeks were concerned with the education of the whole man. The 'whole man' is the man of developed physical and mental qualities and it is the purpose of a Liberal Education to develop these qualities in man and in the process to free him from irrational responses in life's situations.

Bibliography

- A.N. Whitehead : The Aims of Education.
- A.N. Whitehead : Adventures in Ideas.
- Bertrand Russell : On Education.
- Gilbert Highet : The Art of Teaching.
- Newman : The Idea of a University.
- Plato : The Republic.
- D.J.O'Connor : The Philosophy of Education.
- J.S. Brubacher : Modern Philosophies of Education.
- A.D. Woozley : Theory of Knowledge.
- Vives : De Ratione Dicendi.
- R. Williams : The Long Revolution.
- Arnold : Culture and Anarchy.
- University of Durham : The Educational Function of a University.
- University of Durham : General Education in School, Technical  
College and University.