

TEACHER EDUCATION AND HIGHER LEARNING

Pádraig Hogan

*Lecturer in Philosophy of Education,
St. Patrick's College, Maynooth*

I

Why a degree for all teachers?

Recent years have witnessed moves in many countries to establish teaching as an all-graduate career. At the level of initial teacher education, certificate and diploma courses have gradually given way to courses leading to Bachelor's degrees, and for teachers qualified for a number of years under the older systems the number of in-service courses leading to degrees has increased. These moves reveal a significant shift in the way their work is viewed by the majority of teachers themselves and indicate also a change in the way teaching has come to be regarded by educational authorities and members of the public more generally.

Numerous reasons can be put forward for these changes in attitude among those involved in and those associated with the field of education. Firstly, from a social and economic viewpoint, most teachers are no longer content to be seen in their historical role as servants whose work mainly consists in uncritically carrying out the directives of a State Department of Education or Examination Board. In addition, those who became teachers by taking a Bachelor's Degree in Arts, Science or Business Studies, followed by a one-year Diploma or Certificate in Education, have traditionally enjoyed a higher status among their peers as a whole than those who became teachers by pursuing a two or three year course leading to a teacher's certificate or diploma. Growing dissatisfaction with this state of affairs gave further impetus to demands for change. Teachers' unions have reflected the new outlook by pressing for undisputed professional status for the teacher and they view the attainment of degrees for all teachers as a major step towards this end.

Secondly, from an educational viewpoint, developments in the human sciences, particularly psychology and sociology, have made educators increasingly sensitive to the influence of complex personal and environmental factors on human learning. Accordingly, it is argued that the teacher who has not studied these developments in considerable depth lacks the understanding and the competence to undertake teaching in the wide variety of circumstances he is likely to encounter during his career. Historians and philosophers of education, moreover, argue that it is of first importance for a teacher to have a keen appreciation of the forces which have shaped the milieu in which he works and to be alert to the manner in which he understands *himself* and his

relationships in this milieu (viz. with his pupils, with colleagues, parents, Principal, Management, Inspectorate, etc.).

Moves towards an all graduate profession have not been without their critics however, and some of the more vocal of these critics have themselves been experienced teachers. For instance it is sometimes charged that the degree courses for teachers which replaced the certificate and diploma courses, have introduced into teacher-training a heavy and unnecessary element of theory, sometimes pejoratively described as 'academic', and have taken the emphasis away from 'the practical' where, it is thought, it should properly belong. From a purely pragmatic viewpoint this argument can have a persuasive force, particularly if the more intellectually demanding and time consuming studies on a degree course are not seen to be relevant to the actual work of teaching. The case against degree courses for all teachers is strengthened, moreover, if the subject-matter and examinations on these courses are regarded by universities as being of a lower standard than those on traditional undergraduate courses. Hence critics sometimes conclude that, with the displacement of the certificate and diploma courses by degree courses, the student teacher is left in a no-man's land: is neither properly trained as a teacher nor properly educated as a university undergraduate.

Each of these criticisms may, in varying degrees, be true of ill-planned or poorly taught degree courses for student teachers. It must be pointed out nevertheless that any argument which proposes that student teachers should *not, in principle*, follow degree courses in order to become teachers (but should follow instead the traditional, 'more practical' courses), proceeds from a fixed, but inappropriate view of what teaching is and what constitutes an educational setting. In other words, what this kind of argument suggests is that teaching is primarily concerned with training and moulding people to a definite pattern, by using certain established or unchanging methods of instruction and discipline. On this view, the preparation of teachers would be somewhat analogous to the training of military officers, not so much in terms of curriculum but rather in terms of the general rationale for the training course to be followed, the disposition to be inculcated in the 'cadet' and the approach to be taken to his charges on completion of training. While acknowledging that a variety of routines and constraints always attend the practice of education, it is a serious mistake to understand these routines and constraints as constituting the essential business of teaching. In a proper educational setting, teaching is concerned with developing and deepening a learner's understanding of himself and his world through an increasingly literate and an increasingly enriching series of encounters with the subjects he is studying.

It should also be acknowledged at this point that many teachers who view their work in the narrower terms of a rote training and instruction,

whether of a vocational, intellectual or moral character, have produced creditable results in making pupils numerate and literate, particularly in times when schooling ended for the majority of pupils in their early teens and a primary education had itself to be seen as a preparation for life and for the pupil's likely place in that life after leaving school. But the characteristics imposed upon teaching by the circumstances, outlooks and manners of earlier eras tend to become institutionalized and thus to become established routines in which teachers become inured. Consequently, these routines often linger on in the minds and practices of teachers although the social and economic circumstances which gave rise to them may have dramatically altered. Hence teaching might still be viewed by some teachers as a drill-like activity where there is to be a direct, or straightforward relation between what the teacher instructs and what the student learns. There is a serious discrepancy, however, between this view and what actually takes place wherever a teacher is present with pupils in a classroom for the purposes of learning. The American philosopher John Dewey has often emphasized this discrepancy and in one of these instances he writes:

Perhaps the greatest of all pedagogical fallacies is the notion that a person learns only the particular thing he is studying at the time. Collateral learning in the way of formation of enduring attitudes, of likes and dislikes, may be and often is much more important than the spelling lesson or lesson in geography or history that is learned.¹

Dewey states further that these tacitly formed attitudes are fundamentally what count in the future if successful learning is to take place. The very presence of a teacher with pupils to bring about learning involves an interplay not only of information, but more tacitly, of beliefs, attitudes, prejudices, inspirations, etc. The tacit interplay takes place at the level of the *presuppositions* which underlie the visible behaviour of teacher and pupils, or in other words, at the level of *experience* rather than the level of behaviour. The teacher who believes his business to be primarily, or simply, that of applying a set of acquired techniques and prescriptions to attain objectives stated in advance, whether of an intellectual or practical or moral nature, unavoidably remains something of a drill-sergeant in his outlook; the real character of his pupils' unfolding experiences remains overlooked by him, and hence inaccessible to him. On the other hand, the realization that his own self-understanding should include a sensitive awareness of the crucial importance of the tacit element in learning distinguishes the teacher who is concerned to bring about properly educational experiences in his pupils and who is conscious of some of the more important consequences of this.

If we accept that teachers have necessary concern in the *education* (intellectual and imaginative enrichment) as well as in the *training*

(acquisition of skills through habituation) of pupils, we must then proceed to examine some of the consequences which flow from the characterization of a teacher as an educator, as distinct from characterizations which describe teachers primarily as practitioners of acquired intellectual and pedagogical skills, i.e. as higher-order technicians or applied scientists. On the basis of this distinction one can proceed to argue the case for degree-level studies for student teachers, but before proceeding with the argument in any detail two preliminary remarks need to be made in order to place that argument in its proper context. Firstly, it is clearly not necessary for a practitioner of a particular skill or craft to obtain a degree in order to practice that craft in a competent way. Rather a period of apprenticeship to an experienced master of the craft is the more appropriate course. Analogously if one wants to be a competent stone-mason one does not need to seek out an accomplished sculptor. Secondly, in talking about a degree for teachers it is not necessary to confine the discussion to degree programmes with which we are already familiar, whether in Universities or Colleges of Education. Rather an attempt must be made to find an application for the traditional concept of a degree — as a period covering 3 or 4 years of relatively mature and progressively deepening study — which, despite the growth of courses with the title 'B.Ed.', has not been a common application up to now; in other words, an application designed uniquely for student teachers.

The argument will start from the premise that the process of teaching and learning, understood in an adequate sense, might form the basis upon which a 3 or 4 year period of study constituted by integrated elements of practical and theoretical experience, might be designed. Some of my earlier remarks may have given an intimation of what the teacher-learning process 'understood in an adequate sense' might mean, but it is necessary to give it a fuller elucidation here as it is the central idea underlying this essay.

II

The enrichment of experience through reflection

Literature on aims and objectives of education is probably in more abundant supply today than ever before. Much of this literature is concerned with the need for greater clarity in formulating objectives, or with the need to make some aspect of a particular educational system more effective. Yet an original and well-argued account of *what makes our human experience genuinely educational* still requires some considerable searching through the literature. Such an account, however, when eventually found, rather than providing us with ready-made formulae, is more likely to make a pervasive demand on each of us

continually to call into question our own tendency to accommodate ourselves uncritically to what is the customary practice in our schools and social order. This kind of demand is contained in an uncompromising form in the Socratic injunction to understand oneself, but in order to consider its implications for anyone concerned with education in our own era, let us review the work of some thinkers who have attempted to elucidate the inner unfolding of human experience, particularly in the context of the ever-developing scientific and technological world which took shape during the eighteenth-century Enlightenment and the nineteenth-century Industrial Revolution, and in which we now live.

Rousseau's forceful castigation of the established social order of his day, as a place where human experience became imprisoned and estranged from itself, together with his powerful plea for education as a liberation of this experience,² exercised a decisive influence on a host of nineteenth-century thinkers who took up and developed in a systematic way in their work Rousseau's appeal to *living feeling*, against the cold rationalism of the Enlightenment. There emerged, accordingly, in nineteenth-century philosophical discourse, a number of important ideas giving further emphasis and more philosophical weight to Rousseau's new departure. For the purpose of this essay two of these ideas merit special attention namely, *Bildung* (personal culture) and *Erlebnis* (lived experience).³ In regard to the first of these two, 'personal culture' is only an approximation of what is meant by *Bildung*. The German philosopher J.G. Von Herder distinguished *Bildung* from more popular concepts of culture by describing it as a quest for humanness, or a 'reaching up to humanity'⁴ through the experience of self-formation or self-cultivation. Hence *Bildung* came to designate 'the properly human way of developing one's natural talents and capacities'.⁵ Wilhelm Von Humbolt further distinguished *Bildung* from the German *Kultur* and from the mere cultivation of one's talents by pointing out that it involved all the fullness of one's *self-understanding*. He wrote:

but if, in our language we say *Bildung*, (rather than *Kultur*) we mean something both higher and more inward, namely the attitude of mind, which, from the total knowledge and feeling of the intellectual and moral endeavour, flows harmoniously into sensibility and character.⁶

In tracing the history of the idea of *Bildung*, the contemporary German philosopher Hans-Georg Gadamer points out that *Bildung* can never characterize the kind of learning where something is mastered as a means to an end, for instance, a skill, a technique, or a text for easy recall in an examination, for such learning, no matter how advanced, is not *educational* in character. Gadamer concludes that in *Bildung*, 'that by which, and through which one is formed becomes completely one's own'.⁷ In other words, one's understanding of one's *self* and of the

world in which one lives becomes shifted to a deeper level and does so in a systematic manner. In the remainder of the text the approximate term 'self-enrichment' will be used to express the special sense of *Bildung* just described.

A number of nineteenth-century writers, perhaps most notably Kierkegaard, succeeded in giving a greater weight and clarity to Rousseau's appeal to recognize the essentially inward character of all human experience.⁸ Following these writers Wilhelm Dilthey made a most significant contribution, in a strictly philosophical sense, to our understanding of human experience by coining the existential notion *Erlebnis*.⁹ Dilthey achieved this by his reflection on the German word *Erleben*, which means: to live through something in its fullness personally. He identified such living-through as having a twofold character. Firstly, *Erlebnis* expresses the immediacy and the impact with which something is personally encountered, or with which something personally happens to one.¹⁰ Such immediacy or impact offers little opportunity for quiet reflection at the time of occurrence on what is being encountered or what is happening to one, so the second element in *Erlebnis* is the *remembered quality* of the experience, which remains with one, and which acquires a certain permanence, flavour and significance through one's reflection on one's experience.¹¹ Thus, experience which we feel deeply at the time of their occurrence have a greater lasting significance for us than our more habitual type of experience, the contents of which we rapidly forget, but the attending routines of which become almost automatic to us with practice. This kind of habitual experience is what we generally mean when we speak of a person 'with years of experience' in any particular field — an experienced pilot, teacher, doctor, carpenter —; so in coining the word *Erlebnis* Dilthey introduced a seminal concept which serves to distinguish our more profound, enriching and memorable experiences from our everyday social and work routines. It is difficult to give a precise English equivalent of *Erlebnis* but perhaps 'reflective experience' is the nearest short translation. This term will be used therefore in the remainder of the essay to identify the twofold character of *Erlebnis*.

Taken together, the notions of self-enrichment and reflective experience provide something approaching an *appropriate basis for understanding education in its most original sense*. In the final part of the essay an attempt will be made to show how the pursuit of such an understanding might itself become the heart of the student teacher's experience as an undergraduate.

If experience which is genuinely educational brings about in a learner a shift in the manner in which he understands himself and his world — by making that understanding deeper and more authentic — then it is clear that the teacher, as the person who must facilitate such experience in pupils, must himself have previously undergone a progressively deepening series of such shifts. This is to suggest that the process of becoming a teacher — in a far deeper sense than any familiar concept of professional training implies — is a gradual process of rediscovery of selfhood. Fundamentally, this means that as his studies proceed the student teacher gradually recognizes in an explicit manner the merits and the shortcomings, the ambiguities and contradictions in his self-understanding, occasioned by years of uncritical habituation in the beliefs and attitudes, prejudices and preferences, of the social world in which he grew up. This process can at once be a liberating and an unsettling event for the student: liberating in the sense that new encounters with life begin to intimate horizons of enriching experience quite undiscovered before, but unsettling also if the pace with which old attitudes and beliefs are placed under question gathers an uncontrolled momentum of its own, and one founders, grasping now at one alternative and then at another but finding no lasting depth of understanding.

The last point here underlines the need for a definite structure in the process of facilitating reflective experience and self-enrichment. Such a structure has, for instance, been carefully articulated by Paulo Freire in his writings.¹² A crucial point about these writings is that they are not abstract theoretical formulations but are rather based on Freire's colleagues' and his own remarkably successful experience as educators in Latin America. Clearly, the problems to be faced in devising an under-graduate course of studies for literate student teachers in European countries are very different from those faced by Freire and his colleagues with illiterate adults in Brazil or Chile, but his work is referred to here to underline the point that a complex formal structure can be given to the kind of educational experience which makes learning through genuine dialogue, rather than didacticism, the keynote of the process.

Turning now to consider some details of the kind of structure a degree course specifically designed for student teachers might have, let us focus our attention again on the two notions of reflective experience and self-enrichment. The notion of self-enrichment, through a progressive deepening of one's personal, historical-social and pedagogical understanding,¹³ supplies the guiding principle for the curricular content of the study courses, and the notion of reflective experience

supplies the guiding principle for the practical teaching of the courses and the atmosphere in which the studies are pursued. In a successful degree programme for student teachers both elements are intermingled and have a mutually strengthening effect. A concrete example should illustrate more clearly how these arrangements might operate in practice.

A student teacher's first experience of teaching practice in a school is usually something totally new, is often traumatic and sometimes even overwhelming. The potency with which things are felt during this period means that the student teacher, on completion of his first session, is left with an enormous body of impressions, reactions, fears, aspirations, etc., which form his recollections of his experience. Now if the student abruptly leaves all of this behind and returns to full-time and formal study of educational psychology, sociology, philosophy, methodology, etc., coupled perhaps with study of a traditional subject discipline in the arts or sciences, there is little opportunity provided for a systematic appraisal of the experiences which he has undergone, so their significance may be interpreted by him in a manner which is likely to be haphazard, if not quite erroneous. When something like this rift occurs between theory and practice — perhaps this happens more regularly than we imagine — the direction of the student's education as a teacher becomes itself haphazard, and his general experience as a student can become deeply frustrating.

If, on the other hand, on completion of his first and subsequent periods of teaching practice, the student teacher returns to his college to engage in a series of discussions and seminars on his experiences — which he has documented — he is afforded an opportunity, and even forced, to recollect his impressions in a systematic way and to place them before his fellow students and tutors in an open dialogue. If provision is made for such seminars or tutorials, the teaching staff of a college or university are also afforded a unique opportunity, in their capacity as leaders or tutors of discussion groups, to make the theoretical studies of the students relevant in a direct manner to their experiences as teachers. In other words, rather than allow the student teachers' experiences of teaching practice gradually to fade from memory, the tutor ensures that each student's experiences of teaching practice become the focus of discussion during a series of seminars and so get a 'second reading' as it were. Hence the themes which emerge during this 'reading' can then be interpreted in a specifically educational context, from which they now acquire a new significance for the students.

The tutoring staff who organize and teach such a degree programme emerge here as distinctly Socratic figures. But the Socratic character of the tutor's action does not end with the teaching practice element of the programme. Rather it describes also the nature of his normal duties

as a teacher. To illustrate this let us return to the example we have been considering. In the seminar discussions which follow teaching practice many issues will emerge as being uppermost in the students' minds. These might include such questions as the rote memorization of mathematical tables, disruptive or aggressive behaviour of pupils, difficulties in the teaching of reading, lack of interest by substantial numbers in a class, failure to complete homework, relations with other teachers in the school, with the school principal, with parents, with inspectors of a Department of Education, with the pupils themselves and so on. Arising from these discussions the tutors might outline numerous themes which might profitably be pursued in such fields as educational psychology, sociology of education, history of education, philosophy of education, or comparative education.

These themes could then become material for lectures and tutorials and in this way the students might be *introduced* to important theoretical works on education — as distinct from having ready-made courses and booklists thrust upon them. The dialogical nature of this introduction moreover, helps to ensure that if, at any stage, the relevance of some course falls into question or gets lost from view, an obligation rests with the tutor to respond to this event: i.e. to re-establish its relevance and to restore a genuine interplay between the student and the material in question. Of course this also implies that the *tutor's* self-understanding undergoes change and development in the light of his experiences with his students. Indeed the measure of this change might be indicated by his willingness to include in his courses ideas, textbooks or other material brought to light by his students and by his willingness, in so far as possible, to re-design his courses periodically in the light of fruitful discussions with his students.

From this example the differences between a carefully designed degree programme for teachers and a traditional kind of undergraduate programme emerge quite clearly. For instance the student teacher's courses are not rigidly prescribed in advance with fixed and lengthy lists of obligatory reading material. Rather the courses are designed from a practical starting point which represents a real meeting of minds between tutor and students. What is agreed in advance however is a teaching policy, or strategy, the characteristics of which include: a course design structure which systematically matches theoretical studies to the experiences of students, a network for periodic review and co-ordination of courses by tutors, provision for a student contribution to such a review, the use of books and other study materials which are suggested by tutors and students *during* the course as being highly relevant, and, not least, a dialogical approach to teaching and learning which not only distinguishes the college atmosphere in general but also *makes public* for students and tutors alike the question of what constitutes a high standard in written assignments or in teaching practice.

Such a structure does not exclude traditional study disciplines in the arts and sciences from being elements in an undergraduate programme for teachers. It does require, however, that an explicit rationale for their inclusion should be provided. Hence a range of disciplines from the arts or sciences might be included for students who wish to select from this range a subject, or subjects, which they might offer as teachers in second level schools. The undergraduate courses for student teachers in such a subject, e.g. Geography, Mathematics, would need to be very carefully tailored to ensure that the students' critical and analytical abilities are afforded adequate scope to engage fruitfully in degree level work, but to ensure also that the students are put in touch with what befalls *themselves* as potential teachers as they study Mathematics or Geography, etc. at university level. This is to say that the course designers need to keep a judicious eye on developments in the second level curriculum in Geography or Mathematics, etc. and to encourage a critical pedagogical alertness *as well as* an academic competence in Geography or Mathematics (or other subjects) among the student teachers.

For primary teachers, the inclusion of traditional subjects from the arts and sciences in their programme of studies must rest on a different, and indeed a more complex argument. This second argument could, however, be relevant also for undergraduate courses for second level teachers. Such an argument would need to achieve a successful balance, in practice, between the following considerations. On the one hand, college authorities, tutors and students themselves, might wish that it should be open to student teachers on completion of their undergraduate programme to proceed to further studies, and that this opportunity should not be confined to further studies in the field of education, whether for transfer to second level teaching or for master's or doctor's degrees. For instance a student who has taken a keen and systematic interest in his studies in Mathematics, or Geography, or Literature, etc. as an undergraduate might be allowed, following a demonstration of his ability to do so in his degree assessments, to proceed to further studies in his chosen discipline. On the other hand, the inclusion of such disciplines should not interfere with but should rather *contribute to* the student's education as a teacher, and to the reflective experience and self-enrichment described earlier.

Such a structure is more easily proposed than actually achieved, but it is possible, using the kind of internal network for curriculum design outlined above, to *introduce* student teachers to a serious study of literature, for instance, through such themes as 'childhood through the centuries' or 'schooling and education' in literature. Hence the texts which comprise the reading material of the introductory course might represent a judicious selection of novels, poems, plays and short stories, in which the chosen themes are explored in depth. Similarly, under-

graduate studies in history might be introduced through an investigation of major ideological and educational movements, introductory Geography through environmental and social studies, mathematics through experiments in number theory, and so on.¹⁴ The importance of a satisfactory introduction is crucial, for once a student has acquired a taste for a field of study, and associates that taste with certain tutors, then the ground has been prepared for further, more demanding, but fruitful explorations of the field in question during the remainder of the course of study.¹⁵ A fundamental principle of pedagogy is also learned in this way by the student teacher.

Finally, it might be suggested, against the arguments set forth in this essay, that the type of degree programme proposed is without precedent, that the structures outlined allow too strong a voice to students and that the inevitable consequence of this would be a drop in academic standards. Perhaps the best way to respond to this argument is to retrace the history of higher education to its formal origins in Greece. In Plato's Academy, teaching and learning were thoroughly Socratic in nature. Unlike the sophists who dispensed wisdom loudly to their passive listeners, the Platonic teachers and their students engaged in a partnership in quest of knowledge.¹⁶ The deepest insights yielded themselves not to the pedantic sophist but rather to the thinker who recognized the priority of the *question* in all learning. Only the latter person, Socrates held, had the humility and sensitiveness to engage others in a genuine quest for knowledge. The use of dialogue in higher learning was also evident in the form of the 'disputation' in the universities of the middle ages, particularly in their earlier period,¹⁷ and in more recent times the procedure of question and answer has produced many fine scholars through the tutorial system, perhaps most notably at universities dating from ancient times.¹⁸ This tradition has become largely eclipsed in our own day however, most significantly perhaps through the 'runaway' and didactic character of modern scientific and technological knowledge; developments which have confirmed the ascendancy of the lecture. A share in such knowledge generally means a competitive scramble by unprecedented numbers of students to memorize facts, laws, theorems, theories and so on, with a view to giving a creditable performance in examinations and thus securing one of the prizes which such success is thought to offer. In addition to its generally dehumanizing effects on students, the questionable learning which results from this kind of educational experience should give us reason for pause before we speak boldly in defence of our 'academic standards'. By contrast, the person who becomes a teacher through engaging for three or four years in a rigorous life of dialogue and enquiry with his tutors brings to his own teaching an understanding which is appropriate to the nature of his work. Similarly he brings from his teaching practice to his college learning

experiences fresh and appropriate material for exploration, together with a desire to see and use the fruits of his exploration. By participating in the kind of experience I have attempted to outline in this essay such a person can scarcely avoid a qualitative re-appraisal or rediscovery of himself and his fellow humans as persons. His ultimate worth as an educator will depend primarily on the extent to which he subsequently proceeds further along the path of this rediscovery.

FOOTNOTES

1. John Dewey, *Experience and Education* (New York, Collier MacMillan 1975), p. 48.
2. Jean Jacques Rousseau, *Emile* (translated by B. Foxley, London, Everyman's Library 1966).
3. The history of these and other important concepts in philosophy and the social sciences during the nineteenth and twentieth centuries is considered in detail by Hans-Georg Gadamer in his large work *Truth and Method* (translated by G. Barden and J. Cumming, London, Sheed and Ward, 1975).
4. Quoted in Gadamer, *ibid.*, p. 10.
5. *Ibid.*, p. 11.
6. *Ibid.*
7. *Ibid.*, p. 12.
8. Virtually all of Kierkegaard's writings deal with this theme. Many of his earlier thought and arguments on the unfolding of human experience are brought together in his *Concluding, Unscientific Postscript* (translated by D.F. Swenson & W. Lowrie, Princeton University Press 1976).
9. The importance of Dilthey's work for the advancement of social sciences is increasingly being acknowledged in English-speaking scholarly circles as more of his writings become available in translation. The most recent and comprehensive of these translations is H.P. Rickman's *Dilthey: Selected Writings* (Cambridge University Press, 1976).
10. See Gadamer, *ibid.*, p. 55.
11. *Ibid.*
12. See, for instance, *Pedagogy of the Oppressed* and *Cultural Action for Freedom* (both published by Penguin, 1971) and also *Education for Critical Consciousness* (New York, The Seabury Press, 1973).
13. By pedagogical understanding here I mean the student teacher's understanding of the teaching-learning process.
14. The suggestions contained here for introducing students to disciplines of higher learning via the student's present concerns and interests owe a lot to conversations I had with Mr Seamus Heaney and Dr John Cosgrave. Carysfort College of Education, Blackrock, Co. Dublin. Unfortunately, suggestions for the different disciplines can only be presented in brief outline in an article such as this.
15. The approach suggested here makes practical use of the notion of the 'spiral curriculum' articulated by Jerome Bruner. In a spiral curriculum the principles operating in even the most complex fields of enquiry are articulated in such a way that simpler 'working versions' of them can be employed in introducing students to the field in question in an authentic manner. Proceeding from such introduction the teacher can work towards ever more complex levels of thought, via recapitulation of earlier learning and principles as new material is introduced - hence the term 'spiral'.
16. For a discussion of contrasting styles of higher education in ancient Greece see W. Boyd's and E.J. King's *The History of Western Education* (London, Adam and Charles Black, 1960, Chapter I and particularly pp. 25-26). See also E.B. Castle's *Ancient Education and Today* (Pelican, 1965), particularly Chapter 3.
17. Boyd and King, *ibid.*, pp. 147-148, also S.J. Curtis and M.E.A. Boulton, *A Short History of Educational Ideas* (Slough, University Tutorial Press, 1977), particularly pp. 107-110.
18. One such scholar, Bertrand Russell, recollecting his own student days, gives a lively account of how the tutorial system operated in Oxford and Cambridge. His remarks indicate how students viewed lectures in comparison with tutorials: 'When I was an undergraduate my feeling, and that of most of my friends was that lectures were a pure waste of time.' See his book *On Education* (Unwin, 1926, 1969), pp. 165-166.