

# **The Problem of Educational Levels, Part II: A New Framework for Credit Accumulation in Higher Education**

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## **Abstract**

(This paper is the sequel to a paper published in the previous issue of the Journal.)

There is a fundamental confusion in the categories currently used to present notions of educational levels. These categories are derived from a grading hierarchy, but are used to describe differences between staged educational awards. Empirical data from a recent survey of assessment categories suggests that we use the same categories to assess A level, undergraduate, and postgraduate work. However, it also appears that these three stages can nevertheless be differentiated, not in terms of cognitive function, however, but in terms of the developing social role of the learner and their work. In the light of this argument, a new model for credit accumulation in higher education is proposed.

## **Introduction: Levels, Grades and Stages — The Current Confusion**

We all know that assessment is part of education, that learners' progress needs to be assessed if their further learning is to be effectively facilitated. But until quite recently it seemed quite acceptable, in higher education at least, to leave the nature of this process as a tacit, almost private affair. For example: 'Examiners have tended to hold in their minds a personal sense of . . . course objectives . . . The standards . . . (are not) . . . normally set down on paper' (CNA, 1989, p.33). In contrast, the various higher education curriculum initiatives of recent years (Enterprise, Capability, National Vocational Qualifications, modularity, the accreditation of prior learning and work-based learning, etc.) have all tended to require that assessment criteria be made more explicit.

The reason for this tendency towards more explicit assessment criteria derives from the thrust (shared by all the initiatives listed) towards curricula which are more varied, more flexible and more individualised. Where assessment judgements are made within a clearly defined, predictable, and familiar arena (e.g. a conventional single subject academic course taught by a small group of specialist colleagues within a single institution) then the basis for



judgements can indeed remain implicit, since they can rest on the taken-for-granted understandings which a closely knit 'knowledge community' can safely assume that it shares, and thus 'take on trust'. But the initiatives which constitute 'the New Higher Education' (see Winter, 1991) suddenly expand the community which needs to trust the basis for its members' judgements. Suddenly, 'a degree' may consist of units of learning from various disciplines, credit awarded for prior learning, and credit awarded for learning derived from work experience; furthermore, credits may be accumulated (with interruptions) over a much longer period than a conventional course, and may be transferred between institutions. Hence the need to make criteria more explicit, and more precise: agreed judgements need to be transmitted between 'strangers', separated by boundaries of academic discipline, time, space, and institutional culture, whose basis for trust resides in the procedures of a system, rather than in face-to-face interaction.<sup>1</sup>

We therefore find ourselves under pressure to reformulate our curriculum objectives and our assessment criteria in the form of explicit 'learning outcomes' (see FEU, 1992) so that we can identify equivalent levels of educational achievement across many different learning contexts, and in such a way that progression to successively higher levels (as one of the main parameters of the educational process) can still be ordered, monitored, and ensured. This is what the New Higher Education initiatives require, and what the proposed frameworks for the accumulation and transfer of educational credit are already promising. And indeed, we might reasonably have hoped that when our implicit but familiar, tried-and-trusted assessment criteria were fully written out as learning outcomes, they would turn out to reveal, spontaneously, the pattern of consistency and progression that we desire, so that a framework for educational credit would fall 'naturally' into place.

But, as usual, it is not that simple. One of the basic problems (see Winter, 1993) is that formulations of educational 'levels' (such as NCVQ, 1991, p.4) and frameworks for credit accumulation and transfer (such as FEU, 1992) rely on a set of categories originally developed for the purpose of comparing the performances of a range of candidates (varying in 'ability') in response to a single task. But these categories are then used as the basis for trying to express the differences between the qualities to be expected in work submitted for a sequence of educational awards. In other words, the discussion of educational 'levels' has not distinguished between levels-as-*grades* and levels-as-*stages*, which seems to suggest an implicit (and surely unintended) assumption that the relationship between typical Higher Degree work and typical A level work is the same as the relationship between exceptionally good A level work and poor but acceptable A level work. This basic confusion, leading to the unwarranted imposition of a simplistic hierarchical pattern, undermines the validity of the credit accumulation framework as a whole.

I am even more convinced by this interpretation of the confusion underlying current documents concerning credit accumulation and transfer and educational levels after completing a study of the categories used to assess the work of students engaged in A level, undergraduate, and higher degree studies. The detailed findings of this study, presented below, permit a closer analysis of the nature of the problem, and also, in the final section, the proposal of an alternative way of formulating a credit accumulation and transfer (CAT) framework.

### **Empirical Data (I) A level**

The A level 'assessment vocabulary' presented below is derived from syllabuses, assessment criteria, and guidance notes published by the Cambridge Local Examinations Syndicate, the Associated Examinations Board, and the Joint Matriculation Board Examinations Council. The documentation covered the following subjects (chosen to provide examples from a range of differing forms of knowledge): Modern Languages, History, Psychology, Business Studies, Physics, Chemistry, and Biology. The data is illustrative, rather than comprehensive, but nonetheless significant: the published guidance from examination boards represents a substantial corpus of considered professional judgement. My purpose is to identify those terms which, having already been used to indicate expectations at A level, are therefore no longer available to *define* the generic characteristics of any later educational stage, e.g. undergraduate, honours degree, postgraduate.

In order to present a 'general' vocabulary, I have selected the terms which have a wide relevance, as opposed to technical specifications referring only to one subject, e.g. those relating to particular scientific apparatus or experimental techniques. Some of the words and phrases from the published sources are quoted here with minor adaptations, in order to maintain some consistency of grammatical form within the list, and thus in the interests of readability. The subheadings under which the terms are presented are also used mainly in the interests of readability; they are not assumed to be mutually exclusive, and a number of the terms could appear under different and/or several of the headings. References to specific subjects have been omitted.

### **A General A Level Assessment Vocabulary**

#### ***1) General Qualities***

- a) Relevant
- b) Interesting
- c) Confident
- d) Original
- e) Sensitive
- f) Critical

## 2) *Presentation/Communication*

- a) Well presented
- b) Clear, concise
- c) Coherent, logical, reasoned, well planned, well ordered

## 3) *Knowledge*

- a) Ability to apply numerical and qualitative knowledge in solving problems
- b) Awareness of experimental design and technique
- c) Awareness of the diversity, applications, and limitations of a discipline
- d) Awareness of alternative interpretations
- e) Critical awareness of the relationship between theory and evidence
- f) Awareness of the historical development of a discipline within its social context
- g) Awareness of the integrated nature of problems within a discipline
- h) Breadth of perspective (e.g. understanding of the ethical, social, and economic, technological, and environmental applications of a particular science)

## 4) *Investigative Work*

- a) Individual enquiry ('research in depth') is undertaken
- b) A range of (suitable) methods is used
- c) The rationale for the investigation is demonstrated
- d) Clear evidence is provided of preparatory work and research e.g. questionnaires, notes, diary, recordings of interviews and discussions
- e) Valid observations are obtained, recorded, processed, and presented
- f) Problems are analysed into feasible procedures and measurable variables
- g) Hypotheses are formulated, extrapolated, evolved and tested
- h) Feasible experimental procedures are designed in order to test hypotheses
- i) Inferences and conclusions from the outcomes of experimental investigations are analysed and evaluated
- j) Assessments are made of the reliability of conclusions and inferences
- k) Data and methods of investigation are evaluated
- l) Choices and methods are justified
- m) Theories are used to analyse data
- n) Arguments are given for the choice of solution to a problem
- o) Advantages and disadvantages of methods are discussed
- p) The results of investigations are related to a wider theoretical framework

## 5) *Intellectual Processes*

- a) Recalling, selecting, and organising relevant knowledge and using it effectively
- b) Understanding factual knowledge, terminology, definitions, concepts, ideas, principles, and relationships, and their application in familiar and

unfamiliar situations

- c) Understanding and appreciating the nature of the theory, conceptual framework, and methodology of a discipline
- d) Making a coherent personal statement, including judgements, evaluations, comparisons, based on a wide variety of material
- e) Presenting a sequence of ideas which is clearly and logically sustained, and supported by well chosen evidence
- f) Interpreting data and translating it into different formats
- g) Analysing/identifying patterns in data
- h) Assessing information from a variety of sources
- i) Evaluating alternative methods
- j) Comparing and contrasting a range of theories
- k) Evaluating theories in terms of empirical evidence
- l) Recognising errors and fallacies
- m) Using data and theory to predict events
- n) Developing skills of analysis, evaluation, and synthesis
- o) Creating a balanced synthesis ('an integrative approach')
- p) Thinking critically/critical evaluation/critical appraisal
- q) Critical evaluation of information
- r) Critical appreciation of theories
- s) Discussing the status of major concepts in a discipline
- t) Commenting critically on the design of investigations and procedures
- u) Applying the knowledge of a particular discipline to everyday life and to social, technological, economic, and environmental issues
- v) Critical awareness of ethical, social and environmental issues (involved in the application of a discipline)

In a sense, then, the A level assessment vocabulary poses a provocative challenge to higher education: these are all the terms which, since they are already used at A level, may *not* be invoked to clarify differences between one HE educational stage and another. The seriousness of this challenge is that, as I indicate in the following sections, many of these A level terms are indeed the ones we use in assessing higher education work, including master's degree work: such terms as 'originality', 'logical coherence', 'critical evaluation', 'awareness of alternatives', 'breadth of perspective', and 'balanced synthesis' are routinely invoked in assessment comments on HE students' work and in official course documentation *as though they defined the standard* of foundation year HE studies *and* honours degree studies *and* Postgraduate studies. The fact that all these phrases also used at A level indicates that whatever it is we are doing when we invoke such phrases we are *not* defining the specific characteristics of a higher education 'stage'.

### **Empirical Data II: Higher Education Foundation Year**

Higher education does not have the equivalent of A level Examination Boards. Instead, therefore, the material in the three HE assessment vocabularies (Foundation Year, Honours Degree and Postgraduate) was almost entirely derived from the analysis of comments made on assessment report sheets by university tutors. From each report the key phrases were selected which were being used by the tutor to justify a higher or a lower assessment, i.e. which indicated a practical criterion for a judgement as to the level of the work. No notice was taken of phrases whose meaning depended on what might be called 'explicitly vacuous' evaluative terms such as 'good', 'appropriate', 'a high level of', 'inadequate', 'disappointing', 'excellent', etc. which clearly entail a circular logic and thus do not help in clarifying the nature of the criteria being invoked.

The Foundation Year vocabulary is derived from less broadly based data than either the A level or the Honours Degree material, being taken from the tutors' comments on work in three areas: social work, education, and geography. The education assignment was a file of work covering academic and practical work over two terms in 'Educational and Professional Studies'. (Comments made on the work of 99 students, made by 5 different tutors were analysed.) The social work assignment was an essay on social work values. (Comments on the work of 28 students, made by 9 different tutors were analysed.) The geography assignment was an essay, based either on a case study or a general theoretical issue. (Comments of the work of 11 students, made by 2 different tutors were analysed.)

The complete Foundation Year assessment vocabulary is similar in length to the A level vocabulary above. Altogether, over 40% of the A level terms were repeated (more or less) in the Foundation Year material<sup>2</sup> but many apparently new terms and phrases do not add substantially to the criteria being used, but merely indicate either a slight shift of emphasis or a variation of style or register. For example, under *General Qualities*: 'zest', 'flair', and 'liveliness' (Higher Education Foundation Year (HEFY) data) don't add much to 'original', 'interesting', and 'confident' (A level data); under *Knowledge*: 'comprehensiveness' and 'awareness of complexity' (HEFY data) add little to the various criteria listed c) to h) in the A level data; and under *Intellectual Processes*: 'summarising significant points' and 'extracting key issues from a body of material' (HEFY data) add little if anything to 'recalling, selecting, and organising relevant knowledge' and 'making a coherent personal statement, including judgements, evaluations, comparisons, based on a wide variety of material' (A level data).

However, there is a further group of terms which do seem to point to a genuinely new set of expectations, and these are listed below. (For ease of comparison, the same subheadings as those used in the presentation of the

A level vocabulary are repeated.)

2) *Presentation/Communication*

- a) Properly referenced
- b) Vivid

3) *Knowledge*

- a) Awareness of a range of relevant literature

4) *Investigative Work/Practical Activity*

- a) Observations in practical work are linked to . . . reading
- b) Reading (is) applied to practical situations
- c) A personal stance in relation to the work is clarified

5) *Intellectual Processes*

- a) Using personal experience as a starting point for the development of general ideas
- b) Using experience as evidence to illustrate theory
- c) Balancing/linking personal experience and theory
- d) Analysing, questioning assumptions, raising questions
- e) Developing a general philosophy

What this data suggests, then, is that the *distinctive* features of higher education study are not our old friends 'analysis, synthesis, critical evaluation' but an emphasis on a *personal* stance. In an academic context this may be derived from the student's own reading ('a wide range of literature'); for work-based learning contexts we may interpret this as a broad range of resources derived from personal experience, from which students can *question* assumptions, *raise* questions, and produce work which — precisely because it is 'personal' — can strike an assessor as 'vivid'. This is already indicated as characteristic of Foundation Year work. Little is added when we turn to the comments made on final year, i.e. Honours Degree work.

**Empirical Data III: The Honours Degree**

Almost all of the terms in the Honours Degree vocabulary are derived from the comments made by assessors on students' assessment report sheets. Altogether a total of 150 examiners' reports from work submitted by students in the final year of honours degree courses were scrutinised, 20 from a BA in English Literature, 4 from a BSc in Biology, 36 from a Bachelor of Law degree, 23 from a BSc in Nursing, 30 from a BSc in Environmental Planning, 22 from BEd degrees (pre-service and inservice), and 15 from an MED access course (based on the accreditation of prior learning) which uses the BEd honours degree as its benchmark. The work was in a variety of forms:



projects, essays, examination scripts, coursework, and Accreditation of Prior Learning portfolios. The examiners' reports varied in length from three lines to a densely packed side of A4. In addition, a further set of terms was included from a list of assessment criteria in Engineering published by Imperial College, London.

Nearly 85% of the 58 terms and phrases in the honours degree assessment vocabulary are anticipated (more or less) in either the A level vocabulary or the foundation year vocabulary or both. There are also some elaborations or shifts in register. For example, under *General Qualities*: 'systematic' (Honours Degree (HD) data) elaborates 'comprehensive' (HEFY data) and in a similar fashion, 'awareness of irony/ideology/inherent conflicts of interest/the need for further work' (HD data) elaborates the reference to 'awareness of complexity' in the HEFY data. What we are then left with, out of the total list of 58 terms in the honours degree assessment vocabulary, is as follows:—

1) *General Qualities*

Self analytical

2) *Presentation/Communication*

Witty, sophisticated

5) *Intellectual Processes*

Taking responsibility for decisions

Even here, 'self-analytical' and 'taking responsibility for decisions' may be taken as merely extending the fundamental emphasis on personal involvement already expected in the foundation year data.

The data presented and discussed so far have quite dramatic implications for our thinking about educational stages and levels and the learning outcomes in which we are now beginning to formulate both. First, we do not have a basis for making a general differentiation of stages within undergraduate studies, i.e. between foundation and final year work. Second, what is distinctive about higher education, as opposed to A level work, is not a series of intellectual processes ('analysis', 'critical evaluation') but a shift in the *role* of the learner, from one who works within a set of guidelines quite strictly controlled by the teacher to one who finds things out 'for themselves', including through their *reading*, and thus develops an individual, *personal* stance within which they may produce work that is not entirely predictable by tutorial staff, and can provoke in them responses such as 'vivid', 'witty', 'sophisticated', as tributes to its personal qualities.

Two types of learning outcome are thus needed to identify the specific characteristics of the undergraduate stage of education (i.e. the stage certified

in the honours degree): those which demonstrate a capacity for relatively *autonomous* learning, and those which demonstrate a *personal* synthesis derived from both *practical experience* and from *reading*. What, then, of the postgraduate stage?

#### **Empirical Data IV: Postgraduate Work**

Altogether, I analysed 132 assessors' reports on work submitted for three postgraduate courses, one 'academic' in focus (an MA in Women's studies) and the other two explicitly vocational (an MEd and an MSc in Management). This total comprises 50 essays and 82 dissertations.

Most of the terms used in the A level and undergraduate assessment vocabularies are repeated in the postgraduate material: tutors noted whether the work was relevant, interesting, balanced, insightful, imaginative, sensitive, well-written, clear, concise, logical, and coherently structured; whether the student had selected and organised the material, successfully combined different approaches, and developed conclusions from the analysis of data; and whether the work was based on sound data, valid observation, and critical analysis of issues, concepts and theories. However, there are also two new and distinctive emphases in assessors' responses to postgraduate work, which (as with the undergraduate stage) embody above all a new *role* for the learner: 1) students' commitment to a specialism, and 2) the external value of students' work.

#### *Commitment to a Specialism*

Assessors' comments suggest that they expect postgraduate students to write from within a specific intellectual identity, which has been 'embraced' as a 'commitment' and whose 'theoretical and ethical grounding' is made explicit: 'By the end I was convinced that an independent position of value had been defined.' The nature of the specialism may take the form of 'interdisciplinary' work (as in the MA in Women's Studies): 'This is not a dissertation written from within one discipline but instead adopts the discourses of various wide ranging disciplines in an effective manner.' However, a specialist identity might equally well focus on a narrowly defined sub-discipline or on the innovative utilisation of a specific technique. In a sense the distinction does not matter, since sub-disciplines are often created by a form of hybridisation, and innovative applications of a technique generate their own specialist expertise. The important thing is that whereas undergraduate students are expected to demonstrate a 'personal' response to a given structure of knowledge, postgraduate students must also show an awareness of the nature of the knowledge structures which are determining their study. In the context of vocational postgraduate work, a similar emphasis derives from the focus on a professional practice situation, which will always require the integration of a *variety*

of theoretical orientations in order to encompass the practical complexities of feasible strategies. Hence MEd assessors note with approval, 'a multi-faceted approach', 'integration of theory and practice', and 'awareness of the links between different types of issue'.

### *External Value*

In an academic context this means that the work is publishable, or (more often) the basis for future published work, e.g. a potential 'full length study' or 'a scholarly edition' or a scholarly article. The type of work required ensures that this is always a possibility (e.g. it may need to include work on 'primary sources') since it is potentially 'a contribution to *our* understanding', i.e. that of the academic community in general. This in turn means a requirement of 'professional' adequacy in matters of scholarship (bibliographies etc.) and procedures for investigation and the reporting of investigation. In the context of vocationally oriented work the criterion of publishability may also be invoked. ('This is of general contemporary interest: publication should be considered.') More frequently, the meaning of 'external value' is expressed in a slightly different and more direct sense, namely: value to the institution in which the study is carried out. The MEd assessment criteria include 'professional value and significance', and assessors refer to 'value to others', 'important practical conclusions', and 'a contribution to policy and practice'. Similarly, assessors' comments on MSc (Management) dissertations include, for example: 'Conclusions offer action possibilities for the client', 'Valuable to the Local Education Authority', 'Pertinent — useful guidelines for senior management', 'The insights yield strategies of value to decision-makers', 'The issues are crucial for the future of the organisation'. One term frequently used especially by MSc assessors to sum up this aspect of the 'social role' of postgraduate work in a vocational context is: 'consultancy' (e.g. 'Consultancy role handled well'). The term serves to link this theme to the concept of a fully formed specialist identity, noted above.

### **Conclusion: Towards a Credit Accumulation Framework for Higher Education**

My survey of assessment criteria, with all its obvious limitations, helps to suggest both the nature of our problem and also the basis for a solution. First, the problem. The continuity of our criteria suggests that when we assess students we have in mind the many complex dimensions of the learning process which are probably common to *all* stages of education — certainly, as I have suggested above, from A level to MA/MSc, and in all likelihood from primary school to PhD. These dimensions of learning subsume all the cognitive processes listed in Bloom's taxonomy (Bloom, 1956) from knowledge of facts to analysis, synthesis, and evaluation. They also involve awareness of values,

commitment to learning, and hence the emotional adjustments involved in accommodating prior understanding to new experience (see Winter, 1993). Assessment thus tends to focus, implicitly, on comparing how far different students match up to this general ideal. This leads to an implication (and perhaps an assumption) that 'excellent' work has characteristics which will be expected as typical at the next educational stage, and that 'poor' work would have been quite acceptable at the previous stage. But this is contradicted by the continuity of most of our assessment criteria across stages, as indicated above. Hence the disquiet concerning current formulations of 'educational levels' at the heart of CAT frameworks, leaving us, still, with key questions unanswered: how can credit be assigned to a level (i.e. to a stage), and how can progression be ensured?

The solution presented below, based on the arguments developed so far, has four constituent elements, the first two providing the necessary flexibility, and the third and fourth providing the necessary limits.

### *1) Learning Outcomes Must Include 'General Learning Abilities'*

Learning outcome statements need to make explicit the full extent of the learning process that we have in mind. This means defining units of learning not only in terms of outcomes which are specific to that unit but also (in the second dimension of a *matrix* of criteria) in terms of the 'general learning abilities', derived from the comprehensive model of learning indicated above, which are common to all units of learning, across all stages. (The continuity of the general learning abilities from A level to MA/MSc has been indicated above; just how far this continuity extends, and in what form, is a matter for further empirical study.) This two dimensional description of learning outcomes (the specific and the general) will make it easier a) to establish equivalences between taught courses and work-based learning, b) to maintain a clear distinction between work-based *learning* and work *experience*, and c) to establish the *amount* of credit to be awarded for work-based learning, in terms of notional learning time (see FEU, 1992: Winter, 1993), because the general learning abilities provide a minimal reference to learning *process*, (without prescribing any particular context or input).

### *2) Stage-Related Criteria Must be Fulfilled in Some (but not All) Units of Learning*

The argument of this paper is that educational stages do have characteristics, associated mainly with the changing social relationships of the learning process. For example, undergraduate stage outcomes include relatively *autonomous* forms of learning based on a personal synthesis derived from linking practical experience and reading; postgraduate stage outcomes include specialist commitment embodied in work which has value to the outside

community and which demonstrates a professional level of mastery of scholarly and/or investigative technique. Within the relatively small-scale units of learning characteristic of a modular curriculum it may be difficult to ensure that students will have the opportunity to fulfil these stage-related criteria in *every* unit of learning, but this is not necessary, since these particular criteria refer to the most general, internal, and significant qualities of the student's learning, which, once demonstrated on a few occasions, may be taken as providing evidence of an overall capability. It is therefore only necessary to specify that every award must include a minimum number of credits in which stage-related outcomes have been demonstrated. The final award in a stage (e.g. the Honours Degree of the MA/MSc) should include special units designed for this purpose (as is already very frequently the case: the 'project', the 'dissertation'), whereas other awards (certificate, diploma) may either include such special units, or, alternatively, allow students to select (with guidance) the unit in which they will attempt to demonstrate the stage-related outcomes, as well as the specific outcomes and the general learning abilities already referred to. In either case, the problem of identifying the educational stage at which credit is to be awarded is resolved (without resorting to difficult and dubious judgements assigning all units to one stage or another) by allowing the demonstration of stage-related outcomes in some units to identify overall the stage at which credit is to be awarded.

### *3) Each Award Must Include an Integrative Unit*

If an award consists of a certain number of credits, representing notional learning time; if all units of learning demonstrate general learning abilities which are common to any successfully completed learning experience, irrespective of educational stage; and if, for example, 180 credits can be defined as being at the 'postgraduate' stage of learning when the stage-related criteria in respect of only 90 of those credits have been fulfilled, then there is an obvious problem concerning the other 90 credits: what prevents a student from submitting, as part of their non-stage-related credits towards an MSc, an *introductory* unit on Conversational Portuguese, which may correspond to a considerable amount of notional learning time? The solution here is that the work for each award within a stage must include an account by the student of her/his rationale for the selection of the various units of learning, including how the understanding derived from one unit is helpful in supporting the learning required by others. Hence, Conversational Portuguese *might* generate insights which would be acceptable as part of an MSc in, say, Comparative Linguistics: it would be up to the student to make the case, and for tutorial staff to judge its plausibility. In this way, the inclusion of a compulsory 'Integrative Unit' in all awards places a restriction on combinations of units while preserving the maximum amount of flexibility by ensuring that at the centre

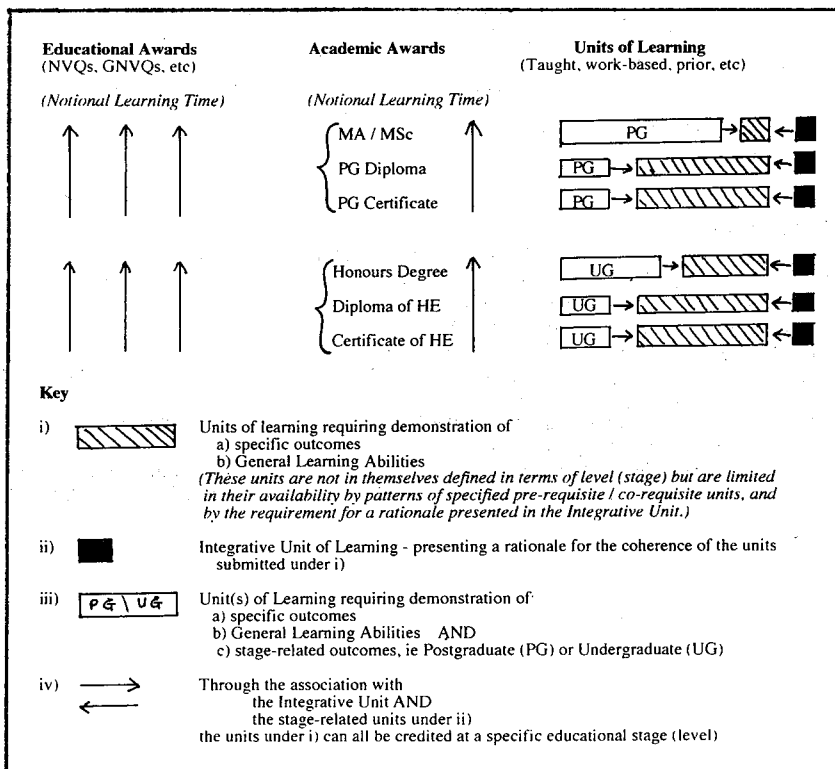
of the student choice lies the student's conscious sense of relevance and purpose, not merely the contingent system of available learning units.

#### 4) *Units of Learning may Identify Pre-requisite and Co-requisite Units*

Most of this discussion has concerned general outcomes, but it must not be forgotten that units of learning will also be described in terms of outcomes which are specific to that unit, and thus to a particular 'area' or academic discipline. In order to ensure that students who are admitted to a unit are in principle capable of benefiting from it, the staff responsible for that unit will in some cases prescribe other units which must have been undertaken previously and/or must be undertaken at the same time. This will place limits on students' choice of pathways through the system of learning units, the limits being greater in those areas where staff define knowledge in terms of a systematic and hierarchical corpus. The point is that the desire of tutorial staff to specify pre-requisite units of learning will change (sometimes even quite rapidly) and will vary between different areas of study (science/humanities), types of study (vocational/non-vocational; taught/work-based) and even between individuals whose teaching styles differ. It is therefore most important that a CAT system should allow for such variability, and should avoid attempting to build any particular pattern of specific pre-requisites into its overall structure, e.g. by attempting to assign all learning units to a given educational stage.

My proposals for a reconceptualised CAT framework are presented below in diagrammatic form. Its advantage over the FEU/NCVQ version (see FEU, 1992; NCVQ, 1991, p.4) is that it does not presuppose a notion of educational stages based on a supposed (but speculative and ideological) correspondence between a hierarchy of educational grading categories and a traditional organisational management hierarchy (see Winter, 1993). My alternative version does include, from the FEU/NCVQ model, an important progression towards increasing personal autonomy and commitment (op cit.), but the significance of these aspects of the framework have now been clarified by the empirical study of educational assessment criteria presented above. The FEU/NCVQ version of a CAT framework formulates educational levels (stages) almost explicitly as a mechanism for social selection in relation to status positions within organisational hierarchies. What I have tried to do is to re-formulate a CAT framework in terms of its *educational* aims, while not in any way avoiding the social purposes which, as suggested quite clearly by the postgraduate assessment criteria, are indeed part of education's conscious and explicit rationale.

### A CAT Framework for Higher Education



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### Notes

1. This argument is indebted to conversations with Michael F.D. Young, Director of the Post 16 Centre at London University Institute of Education. There is an intriguing link also with Basil Bernstein's Durkheimian theory of restricted and elaborated codes (Bernstein, 1971).
- 2) Copies of the complete set of data summarised in the article are available from The Research Centre, Faculty of Health and Social Work, Anglia Polytechnic University, Sawyers Hall Lane, Brentwood, Essex CM15 9BT. Please enclose a cheque for £7.50 payable to 'Anglia Polytechnic University'.

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